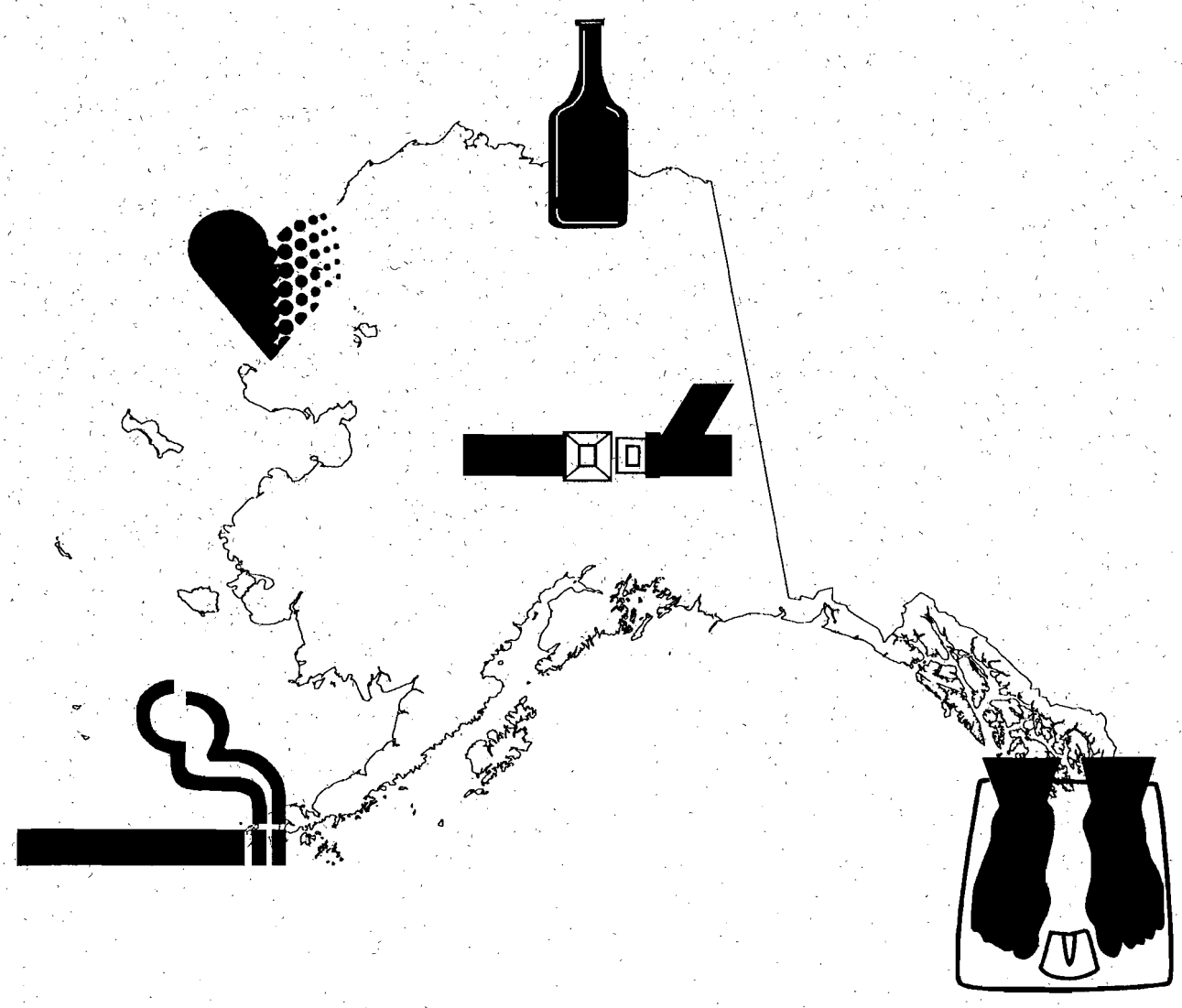
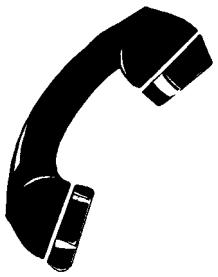
# Alaska Behavioral Risk Factor Survey

# *1993 Annual Report*





# Alaska Behavioral Risk Factor Survey

# *1993 Annual Report*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Finally, special thanks goes to the people of Alaska who participated in this survey.

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*National Year 2000 Health Objectives, along with background information pertaining to the health risks as reported in this document are found in Healthy People 2000, National Health Promotion and Disease Prevention Objectives; U.S. Department of Health and Human Services, Public Health Service, DHHS, Publication No. (PHS) 91-50212. Healthy People 2000 is for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D. C.*

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# Introduction

In recent years, both health professionals and the general public have shown increased interest in how behavioral changes can reduce a person's risk for developing health problems. This interest results from growing evidence that lifestyle strongly influences health. Behaviors linked to health problems are referred to as behavioral risk factors, and they include such things as cigarette smoking, being overweight, alcohol use, having a sedentary lifestyle, not using seat belts and more.

Behavioral risk factors are associated with the ten leading causes of death in the United States and Alaska. Many chronic diseases (such as heart disease, cancer and diabetes) and premature deaths could be prevented through better control of these behavioral risk factors.

Data on behavioral risk factors are necessary for formulating intervention strategies, justifying resources to support these strategies, and proposing new policies or legislation. Surveillance of behavioral risk factors allows us to monitor trends in health behavior and particularly enables us to measure progress toward reaching the "Healthy People 2000, Health Promotion and Disease Prevention Objectives" for the nation. It can also provide the basis for launching and evaluating programs designed to reduce the prevalence of unhealthy behaviors and attain Year 2000 health goals.

Since 1981, the Centers for Disease Control and Prevention (CDC) has helped states survey adults about their health behaviors, by conducting one time telephone surveys. In 1984, CDC initiated the Behavioral Risk Factor Surveillance System (BRFSS), by which 17 states began collecting behavioral risk data through monthly telephone surveys.

The Behavioral Risk Factor Surveillance System was implemented in Alaska in the Fall of 1990, when a Point-in-Time Survey of 400 residents was conducted. In 1991, the Alaska Behavioral Risk Factor Surveillance System became part of an ongoing surveillance system, conducting telephone surveys monthly. Each month, 128 adults, ages 18 and older are interviewed regarding their health and day to day living habits.

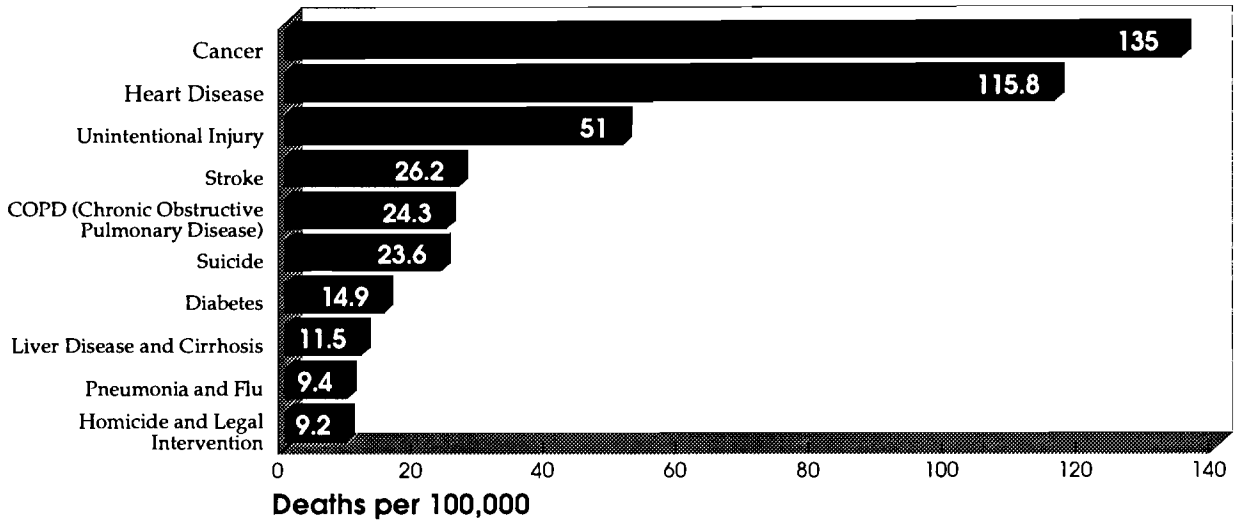
This report contains the 1993 survey results. These surveys were conducted from January through December, 1993, for a total sample size of 1,534 interviews. The Division of Public Health, BRFSS continues to conduct monthly telephone surveys each year.

# The ten leading causes of death and the changeable risk factors associated with them

| Behavioral Risk Factors | Heart Disease | Cancers | Stroke | Injuries (nonvehicular) | Influenza/Pneumonia | Injuries (vehicular) | Diabetes | Cirrhosis | Suicide | Homicides | AIDS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Leading Causes of Death* | | | | | | | | | | |
| Smoking | • | • | • | • | | | | | | | |
| High blood pressure | • | | • | | | | | | | | |
| High cholesterol | • | | | | | | | | | | |
| Diet | • | • | | | | | • | | | | |
| Obesity | • | • | | | | | • | | | | |
| Lack of exercise | • | • | • | | | | • | | | | |
| Stress | • | | • | • | | • | | | • | • | |
| Alcohol abuse | | • | | • | | • | | • | • | • | |
| Drug misuse | • | | • | • | | • | | • | • | • | • |
| Safety belt nonuse | | | | | | • | | | | | |
| Handgun possession | | | | • | | | | | • | • | |
| Sexual practices | | | | | | | | | | | • |

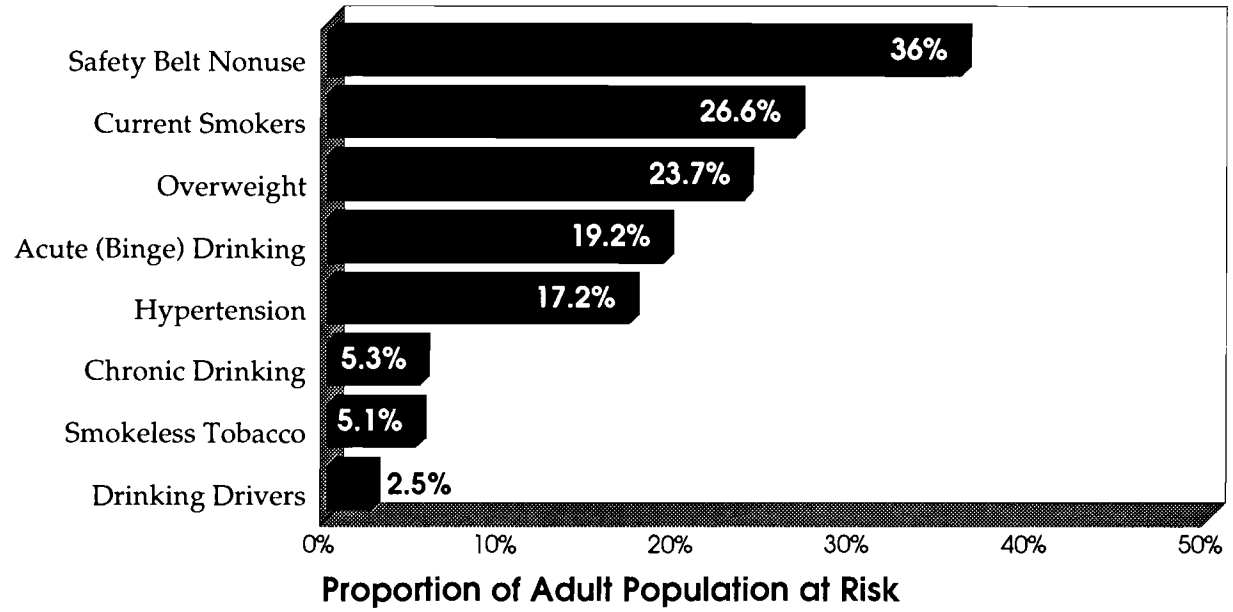
Source: Green, L.W., Kreuter, M.W.. *Health Promotion Planning: An Educational and Environmental Approach.* Mayfield 1991.

# Leading Causes of Death in Alaska




Source: Alaska Bureau of Vital Statistics
*1993 Annual Report*

# Behavioral Risk Factor Prevalence in Alaska



# Methodology

The Behavioral Risk Factor Surveillance System is conducted by the State Division of Public Health in cooperation with the National Centers for Disease Control and Prevention. It is a monthly telephone survey that utilizes a standard protocol and interviewing methods developed by the CDC.

## Sample Design

Although the main purpose of the BRFSS is to estimate the prevalence of behavioral risk factors in the general population, interviewing each person is not economically feasible. Thus, a probability (or random) sample is selected in which all persons have a known chance of selection. The BRFSS in Alaska uses a stratified random sampling design. The Alaska sample was stratified into four regions based on common demographics. An equal number of interviews are conducted from each strata, which purposely oversamples the nonurban areas of Alaska. (See Appendix B)

## Sample Size

Each month 128 Alaska residents age 18 and older are interviewed over the telephone regarding their health practices and day to day living habits, to reach an annual sample size of 1,536 (384 per strata). The data in this report were collected from January through December, 1993, and are based on a sample size of 1,534 interviews.

## Sampling Process

Since 1990, the telephone sample has been generated by the University of Alaska Anchorage, Institute of Social and Economic Research (ISER). In 1993, the Institute of Social and Economic Research used a combination method of computer random generation (using the RANDY method) for large exchanges and random selection from a data base of entered directory numbers for small exchanges. (See Appendix G)

## Survey Instrument

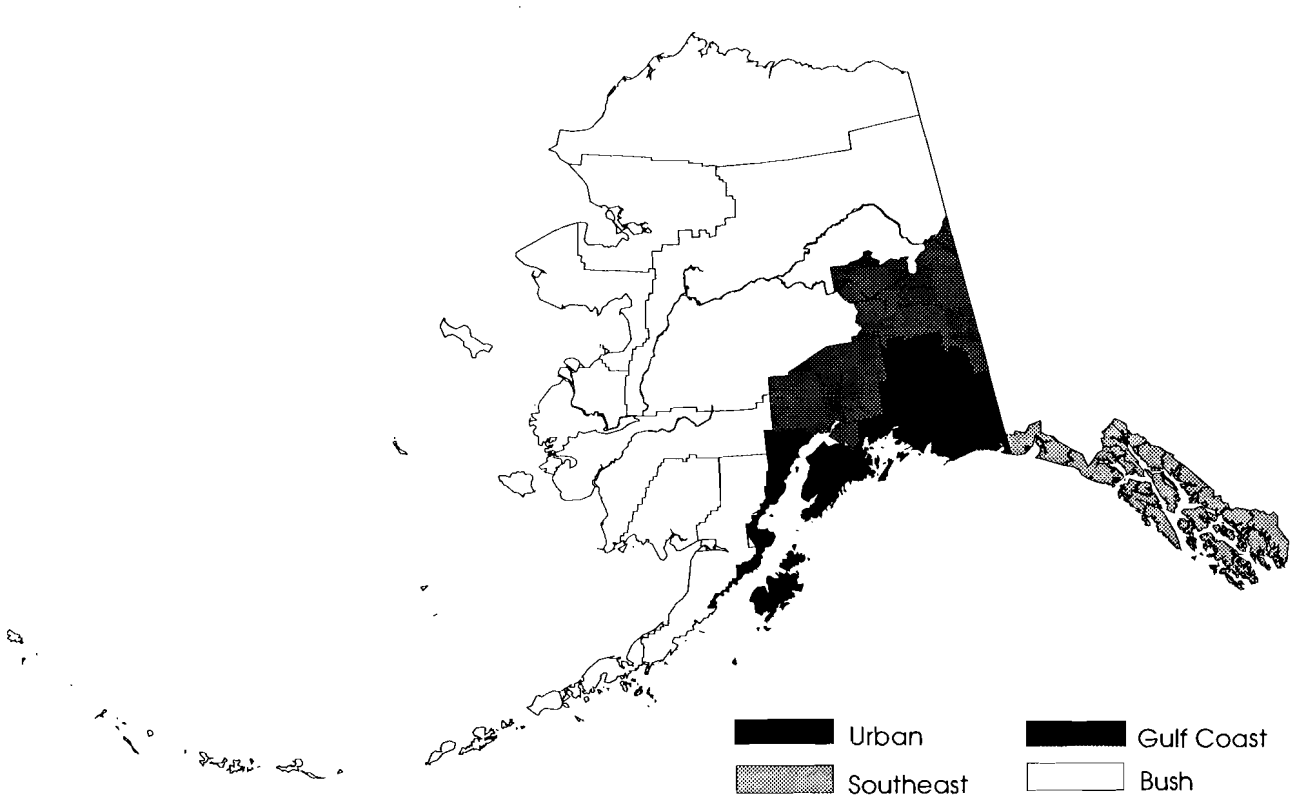
The BRFSS instrument is a standardized questionnaire which consists of three sections;

- the core (which includes demographics),
- a set of optional modules and
- state specific questions.

The 1993 questionnaire covered the topics of Tobacco Use, Alcohol Use, Safety Belt Use, Routine Checkups, Immunizations, High Blood Pressure, Cholesterol Checks, Breast and Cervical Cancer Screening, Colorectal Cancer Screening, Health Care Coverage, Injury Control and AIDS Awareness.

Participation is random, anonymous and confidential. Respondents are randomly selected from among the adult members of the household. Only those living in households are surveyed. Those living in institutions (i.e. nursing homes, dormitories) are not surveyed.

# 1993 BRFSS Sampling Regions




**The Alaska sample was stratified into four regions based on common demographics:** ◆

| | Total Population◆◆ | Population 18 years and older | Number of interviews expected |
|---|---|---|---|
| **Urban** (Strata 1)<br>Anchorage, Fairbanks & vicinity | 349,654 | 242,103 | 384 |
| **Gulf Coast** (Strata 2)<br>Kenai, Kodiak, Valdez, Cordova & vicinity | 64,063 | 43,574 | 384 |
| **Southeast** (Strata 3)<br>All of Southeast Alaska | 68,989 | 48,103 | 384 |
| **Bush** (Strata 4)<br>All other nonurban areas of Alaska | 67,337 | 43,393 | 384 |
| **STATEWIDE TOTAL** | **550,043** | **377,173** | **1,536** |

◆ See Appendix B

◆◆ 1990 Census Population

## Data Collection

In 1993, interviews were conducted by trained college interns. The interviews were conducted primarily in the evenings and on weekends, during the two weeks of every month, specified by the CDC for all states.

Data was collected via computer using Ci3 standalone software. Monthly data files were sent to the Centers for Disease Control and Prevention for editing.

## Data Analysis

The Behavioral Risk Factor Surveillance System (BRFSS) data contains information on Alaskan adults only (age 18 and above).

Data collected by BRFSS are edited by the CDC by applying a computerized algorithm. Edit reports are sent back to the state and corrections are returned to CDC. At the end of each survey year, data are compiled and weighted by CDC, and cross tabulations and prevalence reports are prepared.

**Weighting:** Unweighted data are the actual responses of each survey respondent. The data are weighted or adjusted to compensate for the overrepresentation or underrepresentation of persons in various subgroups. The data are further weighted to adjust the distribution of the sample data so that it reflects the total population of the sampled area. In 1993, survey results were weighted using 1990 Census data for Alaska. (See Appendix I)

**Reporting:** Data are analyzed by the CDC for Alaska by age, gender, race, marital status, income, employment and education. This report describes the results based on age, gender, marital status, income and education.

## Comparisons

All prevalence comparisons made to the National BRFSS Ranges and the National BRFSS Median are comparisons made to the 50 states (49 states plus the District of Columbia) participating in the Behavioral Risk Factor Surveillance System in 1993.

## Limitations

The BRFSS uses telephone interviewing for several reasons. Telephone interviews are faster and less expensive than face to face interviews Calls are made from one central location (Juneau) and are monitored for quality control.

The one main limitation of any telephone survey is that those people without phones cannot be reached and are not represented. In Alaska, about 92% of households have phones (about 93% of all U.S. households have phones). However, the percentage of households with a telephone varies by region in Alaska (see Appendix F). In general, persons of low socioeconomic status are less likely than persons of higher socioeconomic status to have phones and are undersampled. However, survey results (nationally) from the BRFSS correspond well with findings from other surveys conducted in person.

Some inaccuracy is expected from any survey based on self reported information and the potential for bias must be kept in mind when interpreting results.

Survey response rates may also affect the potential for bias in the data, however, in general the Alaska survey response rates were favorable. (See Appendix H)

The reliability of a prevalence estimate depends on the actual, unweighted number of respondents in a category or demographic subgroup (not a weighted number). Interpreting and reporting weighted numbers that are based on a small, unweighted number of respondents can be misleading. The degree of precision increases if the sample size is larger and decreases if the sample size is smaller. In this report, prevalence estimates are not reported for those categories in which there were less than 50 respondents and are rounded to the nearest whole percent when the denominator is less than 500.

Table 1 on the following page describes the sample population and should be used as a basis for understanding the tables in this report.

Table 1

# Survey Population by Selected Demographics

Alaska BRFSS 1993

| | n | % | Weighted N |
|---|---|---|---|
| **Gender** | | | |
| Male | 715 | 53.2 | 200,573 |
| Female | 819 | 46.8 | 176,600 |
| **Age** | | | |
| 18-24 | 145 | 15.0 | 56,639 |
| 25-34 | 414 | 30.1 | 113,516 |
| 35-44 | 464 | 26.5 | 100,102 |
| 45-54 | 251 | 14.1 | 53,244 |
| 55-64 | 109 | 7.8 | 29,231 |
| 65+ | 141 | 5.9 | 22,095 |
| Unknown/Refused | 10 | 0.6 | 2,346 |
| **Education** | | | |
| Never Attended School | 12 | 0.4 | 1,375 |
| Elementary | 59 | 2.4 | 9,068 |
| Some High School | 120 | 7.7 | 29,107 |
| High School Graduate or GED | 510 | 34.5 | 130,023 |
| Some College or Technical School | 446 | 29.6 | 111,768 |
| College Graduate | 385 | 25.4 | 95,734 |
| Unknown/Refused | 2 | 0.0 | 98 |
| **Marital Status** | | | |
| Married | 865 | 60.2 | 227,161 |
| Divorced | 208 | 10.5 | 39,529 |
| Widowed | 61 | 1.8 | 6,821 |
| Separated | 48 | 2.0 | 7,696 |
| Never Married | 274 | 20.0 | 75,422 |
| Unmarried Couple | 76 | 5.4 | 20,429 |
| Unknown/Refused | 2 | 0.0 | 114 |
| **Income** | | | |
| Less than $10,000 | 132 | 6.5 | 24,478 |
| $10,000-$14,999 | 94 | 5.2 | 19,746 |
| $15,000-$19,999 | 135 | 9.6 | 36,287 |
| $20,000-$24,999 | 123 | 8.8 | 33,135 |
| $25,000-$34,999 | 203 | 13.4 | 50,456 |
| $35,000-$50,000 | 290 | 20.2 | 76,168 |
| Over $50,000 | 441 | 29.6 | 111,722 |
| Unknown/Refused | 116 | 6.7 | 25,180 |
| **TOTAL** | **1,534** | **100** | **377,173** |

**n** = Number of survey respondents in this demographic subgroup. Total sample size = 1,534.

**%** = This is a weighted (adjusted) percentage of the state population (adult) in this demographic subgroup, based on the survey data.

**Weighted N** = Weighted sample number, generalized to the state's 1990 census population size.

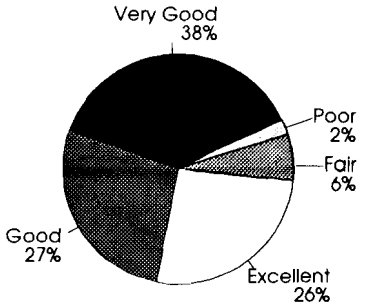
# Quality of Life

A fundamental goal of the year 2000 national health objectives is to increase the span of healthy life for all persons in the United States. Although the average life expectancy of Americans has increased to 75 years, for some persons, increased life expectancy includes periods of diminished health and functions (lowered health-related quality of life). In general, population based information on good health has been limited. In 1993, questions to assess the health related quality of life were added to the BRFSS.

## Self Reported Health Status of Alaskans

**General health status:** In 1993, 64.1% of Alaskan adults rated their own health as excellent or good. Only 8.3% of Alaskans rated their health as fair or poor. (National BRFSS Range 8.35 - 23.33%, National BRFSS Median 12.71%). Of those surveyed, 26.4% rated their health excellent, 37.6% as very good, 27.4% as good, 6.2% as fair and 2.1% as poor.

## How Alaskans Rate Their Own Health




**Recent physical health:** Alaskan adults reported an average of 2.29 days out of the past 30 days when their physical health was not good. (National BRFSS Range 1.58 - 4.10 days, National BRFSS Median 2.94 days). Alaskan males reported an average of 2.08 days during the past month when their physical health was not good. Alaskan females reported an average of 2.54 days during the past month when their physical health was not good.

**Recent mental health:** Alaskan adults reported an average of 2.68 days out of the past 30 days when their mental health was not good. (National BRFSS Range 1.39 - 4.10 days, National BRFSS Median 2.81 days). Alaskan males reported an average of 2.13 days during the past month when their mental health was not good. Alaskan females reported an average of 3.30 days during the past month when their mental health was not good.

**Recent activity limitations:** Alaskan adults reported an average of 1.36 days during the past 30 days when their usual activities were limited due to their physical or mental health. (National BRFSS Range 0.71 - 2.70 days, National BRFSS Median 1.57 days) Alaskan males reported an average of 1.21 days when their activities were limited during the past month and Alaskan females reported an average of 1.52 days when their activities were limited during the past month.

### Year 2000 National Health Objectives

Increase years of healthy life to at least 65 years. (Objective 8.1)

# Risk Factors

## Safety Belt Use

### Health Risk

Unintentional injuries constitute the fourth leading cause of death in the United States, killing approximately 100,000 people each year. During the first four decades of life, unintentional injuries claim more lives than infectious or chronic diseases. In 1987, 2.3 million years of life were prematurely taken by unintentional injuries, more than from any other cause. Motor vehicle crashes account for approximately half the deaths from unintentional injuries; falls rank second, followed by poisoning, drowning and residential fires.

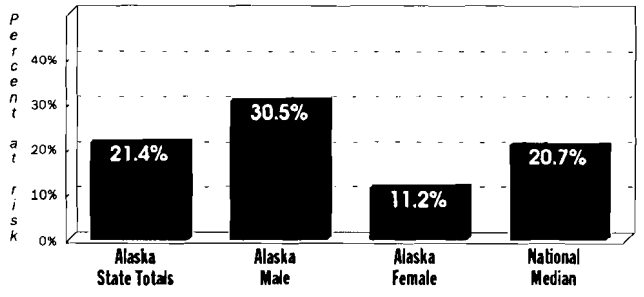
States with mandatory seat belt use laws have significantly lower motor vehicle crash death rates. An estimated 4,500 lives were saved in 1988 as a result of the 45% seat belt use rate obtained nationwide, and 3,800 of those were in States that have mandatory seat belt laws. Alaska is one of the States with a mandatory seat belt law.

### Safety Belt Use In Alaska

*Definitions for this survey:*
***Safety belt (2):*** *Respondents reporting that they sometimes, seldom or never wear seat belts.*
***Safety belt (3):*** *Respondents reporting that they nearly always, sometimes, seldom or never wear seat belts (i.e. they do not always wear a safety belt).*

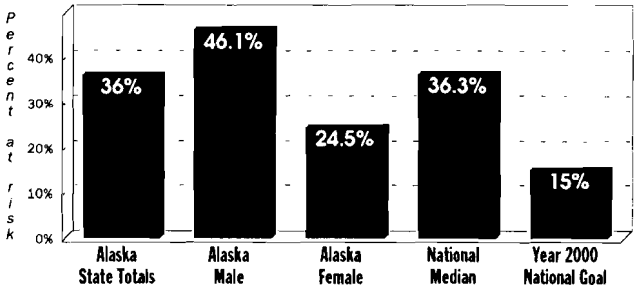
In 1993 in Alaska, 77% of adults reported wearing a safety belt always or nearly always when riding or driving in a car. Among women, 87% reported always or nearly always wearing a safety belt, and 68.1% of the men reported always or nearly always wearing a safety belt.

### Comparison of Risk Prevalence for Safety Belt Nonuse (2)




*National BRFSS Range 3.90 - 51.98%, Median 20.75%*

### Comparison of Risk Prevalence for Safety Belt Nonuse (3)




*National BRFSS Range 10.06 - 74.75%, Median 36.28%*

According to definition (2), 21.4% of Alaskan adults were at risk for not wearing safety belts always or nearly all of the time (National BRFSS Range 3.90 - 51.98%, National BRFSS Median 20.75%).

According to definition (3), 36% of Alaskans were at risk for not wearing a safety belt all of the time (National BRFSS Range 10.06 to 74.75%, National BRFSS Median 36.28%).

**Year 2000 National Health Objectives**

Increase use of occupant protection systems, such as safety belts, inflatable safety restraints, and child safety seats, to at least 85% of motor vehicle occupants. (Objective 9.12)

Table 2

# Prevalence of Safety Belt Nonuse (3) by Selected Demographics

Alaska BRFSS 1993

| | n | % | N |
|---|---|---|---|
| **Gender** | | | |
| Male | 336 | 46.1 | 715 |
| Female | 263 | 24.5 | 819 |
| **Age** | | | |
| 18-24 | 62 | 38 | 145 |
| 25-34 | 177 | 38 | 414 |
| 35-44 | 176 | 29 | 464 |
| 45-54 | 96 | 41 | 251 |
| 55-64 | 44 | 43 | 109 |
| 65+ | 40 | 28 | 141 |
| Unknown/Refused | 4 | ◆◆ | 10 |
| **Education** | | | |
| Never Attended School | 4 | ◆◆ | 12 |
| Elementary | 22 | 34 | 59 |
| Some High School | 54 | 39 | 120 |
| High School Graduate or GED | 216 | 39 | 510 |
| Some College or Technical School | 178 | 37 | 446 |
| College Graduate | 124 | 30 | 385 |
| Unknown/Refused | 1 | ◆◆ | 2 |
| **Marital Status** | | | |
| Married | 319 | 31 | 865 |
| Divorced | 89 | 46 | 208 |
| Widowed | 15 | 21 | 61 |
| Separated | 24 | ◆◆ | 48 |
| Never Married | 115 | 46 | 274 |
| Unmarried Couple | 37 | 39 | 76 |
| Unknown/Refused | — | — | 2 |
| **Income** | | | |
| Less than $10,000 | 44 | 29 | 132 |
| $10,000-$14,999 | 38 | 40 | 94 |
| $15,000-$19,999 | 62 | 45 | 135 |
| $20,000-$24,999 | 52 | 45 | 123 |
| $25,000-$34,999 | 86 | 35 | 203 |
| $35,000-$50,000 | 99 | 32 | 290 |
| Over $50,000 | 177 | 35 | 441 |
| Unknown/Refused | 41 | 33 | 116 |
| **TOTAL** | **599** | **36.0** | **1,534** |

95% Confidence Interval (32.4 - 39.5%)

◆◆ = Not Reported

**n** = Number of respondents who do not always wear a safety belt.

**%** = This is a weighted percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

**N** = Total number of respondents in this subgroup. Total sample size = 1534.

# Smoking

## Health Risk

Tobacco use is the most important single preventable cause of death and disease in our society. Tobacco use is a major risk factor for diseases of the heart and blood vessels; chronic bronchitis and emphysema; cancers of the lung, larynx, pharynx, oral cavity, esophagus, pancreas, and bladder; and other problems such as respiratory infections and stomach ulcers. Cigarette smoking accounts for about 434,000 deaths, or one fifth of all deaths in the United States. Smoking accounts for 21% of all coronary heart disease deaths, 87% of lung cancer deaths, and 30% of all cancer deaths. Cigarette smoking during pregnancy accounts for 20 to 30% of low birth weight babies, up to 14% of preterm deliveries, and about 10% of all infant deaths.

## Smoking In Alaska

*Definition of current smoking for this survey: Respondents who have smoked at least 100 cigarettes in their entire life and smoke now (regularly and irregularly).*

Alaska had one of the highest prevalence rates of smoking in the country. Among Alaskan adults, 26.6% currently smoked cigarettes (National BRFSS Range 14.45 to 30.05%, National BRFSS Median 22.53%). It was higher among males (28.1%) than females (25.0%).

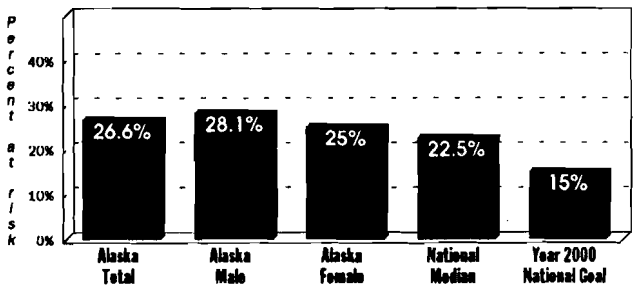
Over half of all the people surveyed (53.2%) had smoked at least 100 cigarettes in their lifetime. Of all the people who had smoked during their lifetime, half (50%) had quit. Most (62%) former smokers quit smoking over five years ago. Of those who currently smoked, 81% smoked less than a pack a day, 15% smoked more than one pack a day and 3% reported smoking occasionally. Most current smokers (74%) said they would like to stop smoking and a little over half (58%) of the current smokers had quit smoking for one day or longer within the last year.

### Year 2000 National Health Objectives

Reduce cigarette smoking to a prevalence of no more than 15% among people aged 20 and older. (Objective 3.4)

Increase to at least 50% the proportion of cigarette smokers aged 18 and older who stopped smoking cigarettes for at least one day during the preceding year. (Objective 3.6)

### Comparison of Risk Prevalence for Cigarette Smoking




*National BRFSS Range 14.45 - 30.05%, Median 22.53%*

Table 3

# Prevalence of Cigarette Smoking by Selected Demographics

Alaska BRFSS 1993

| | n | % | N |
|---|---|---|---|
| **Gender** | | | |
| Male | 220 | 28.1 | 715 |
| Female | 219 | 25.0 | 819 |
| **Age** | | | |
| 18-24 | 43 | 29 | 145 |
| 25-34 | 127 | 27 | 414 |
| 35-44 | 137 | 30 | 464 |
| 45-54 | 71 | 23 | 251 |
| 55-64 | 31 | 26 | 109 |
| 65+ | 28 | 17 | 141 |
| Unknown/Refused | 2 | ◆◆ | 10 |
| **Education** | | | |
| Never Attended School | 3 | ◆◆ | 12 |
| Elementary | 10 | 14 | 59 |
| Some High School | 62 | 45 | 120 |
| High School Graduate or GED | 190 | 38 | 510 |
| Some College or Technical School | 122 | 25 | 446 |
| College Graduate | 52 | 9 | 385 |
| Unknown/Refused | — | — | 2 |
| **Marital Status** | | | |
| Married | 216 | 24 | 865 |
| Divorced | 73 | 38 | 208 |
| Widowed | 14 | 24 | 61 |
| Separated | 26 | ◆◆ | 48 |
| Never Married | 83 | 25 | 274 |
| Unmarried Couple | 27 | 36 | 76 |
| Unknown/Refused | — | — | 2 |
| **Income** | | | |
| Less than $10,000 | 57 | 44 | 132 |
| $10,000-$14,999 | 26 | 19 | 94 |
| $15,000-$19,999 | 50 | 39 | 135 |
| $20,000-$24,999 | 44 | 32 | 123 |
| $25,000-$34,999 | 70 | 31 | 203 |
| $35,000-$50,000 | 78 | 26 | 290 |
| Over $50,000 | 87 | 17 | 441 |
| Unknown/Refused | 27 | 28 | 116 |
| **TOTAL** | **439** | **26.6** | **1,534** |

95% Confidence Interval (23.4 - 29.9%)

◆◆ = Not Reported

**n** = Number of respondents who are current regular and irregular smokers.

**%** = This is a weighted percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

**N** = Total number of respondents in this subgroup. Total sample size = 1534.

# Smokeless Tobacco Use

## Health Risk

Oral cancer has been shown to occur several times more frequently among smokeless tobacco users than among nonusers and may be 50 times as frequent among long-term snuff users.

The consumption of smokeless tobacco in the United States increased 40% between 1970 and 1986. Most new users of smokeless tobacco products are adolescent males. In 1988, 6.6% of males aged 12 through 17 had used some form of smokeless tobacco in the preceding month. The prevalence of smokeless tobacco use among males aged 18 through 24 was 8.9% in 1987. Between 1970 and 1986, the prevalence of snuff use increased fifteenfold and chewing tobacco use increased more than four-fold among men aged 17 through 19.

All smokeless tobacco products contain substantial amounts of nicotine; their use can support nicotine dependence and may lead to cigarette use.

## Smokeless Tobacco Use in Alaska

Of all Alaskan adults, 28.6% reported to have ever used or tried chewing tobacco or snuff or both. Of men, 46.3% had used or tried such products, and 8.6% of women.

Among Alaskan adults, 5.1% were current smokeless tobacco users. The prevalence of smokeless tobacco use was higher among males (7.9%) than females (2.0%).

Among the 18 to 24 year old males, 7% used smokeless tobacco and among the 18 to 24 year old females 7% used smokeless tobacco.

### Year 2000 National Health Objectives

Reduce smokeless tobacco use by males aged 12 to 24 to a prevalence of no more than 4%. (Objective 3.9)

Table 4

# Prevalence of Smokeless Tobacco Use by Selected Demographics

Alaska BRFSS 1993

| | n | % | N |
|---|---|---|---|
| **Gender** | | | |
| Male | 78 | 7.9 | 715 |
| Female | 21 | 2.0 | 819 |
| **Age** | | | |
| 18-24 | 13 | 7 | 145 |
| 25-34 | 37 | 7 | 414 |
| 35-44 | 26 | 4 | 464 |
| 45-54 | 10 | 4 | 251 |
| 55-64 | 7 | 3 | 109 |
| 65+ | 6 | 3 | 141 |
| Unknown/Refused | — | — | 10 |
| **Education** | | | |
| Never Attended School | 1 | ◆◆ | 12 |
| Elementary | 9 | 14 | 59 |
| Some High School | 8 | 7 | 120 |
| High School Graduate or GED | 51 | 8 | 510 |
| Some College or Technical School | 22 | 4 | 446 |
| College Graduate | 8 | 1 | 385 |
| Unknown/Refused | — | — | 2 |

| | n | % | N |
|---|---|---|---|
| **Income** | | | |
| Less than $10,000 | 15 | 8 | 132 |
| $10,000-$14,999 | 7 | 4 | 94 |
| $15,000-$19,999 | 13 | 10 | 135 |
| $20,000-$24,999 | 10 | 8 | 123 |
| $25,000-$34,999 | 11 | 4 | 203 |
| $35,000-$50,000 | 15 | 5 | 290 |
| Over $50,000 | 17 | 3 | 441 |
| Unknown/Refused | 11 | 8 | 116 |
| **TOTAL** | **99** | **5.1** | **1,534** |

◆◆ = Not Reported

**n** = Number of respondents who are current smokeless tobacco users.

**%** = This is a weighted percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

**N** = Total number of respondents in this subgroup. Total sample size = 1534.

# Overweight

## Health Risk

Overweight is associated with high blood cholesterol, high blood pressure, and diabetes and is an independent risk factor for heart disease. Overweight also increases the risk for gall bladder disease and certain types of cancers.

Studies reveal that reduction in body weight can lower blood pressure and improve blood cholesterol levels in overweight individuals and in individuals who have high blood pressure or blood cholesterol.

## Overweight in Alaska

*Two definitions were used for this survey:*
*Overweight (1): Respondents at or above 120% of ideal weight. Ideal weight is defined as the mid-value of a medium frame person from the 1959 Metropolitan Life Insurance Tables.*

*Overweight (2): Females with body mass index [weight in kilograms divided by height in meters squared (w/h **2)]>=27.3 and males with body mass index >=27.8.*

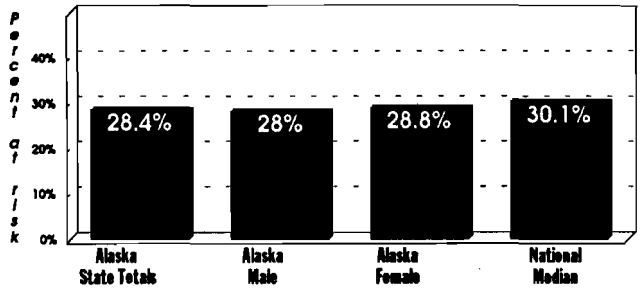
According to definition (1), based on percent of median, 28.4% of Alaskan adults were overweight (National BRFSS Range 24.02 to 36.30%, National BRFSS Median 30.09%). Among men, 28.0% were overweight and among women, 28.8% were overweight.

According to definition (2), based on body mass index, 23.7% of Alaskans were overweight (National BRFSS Range 20.20 to 31.66%, National BRFSS Median 25.52%). This is slightly higher than the Year 2000 goal of 20%.

### Year 2000 National Health Objectives

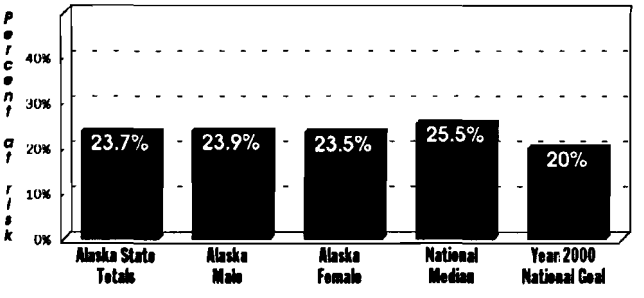
Reduce overweight to a prevalence of no more than 20% among people aged 20 and older, and no more than 15% among adolescents aged 12 to 19 (based on body mass index). (Objective 2.3)

### Comparison of Risk Prevalence for Overweight (1)




*National BRFSS Range 24.02 - 36.30%, Median 30.09%*

### Comparison of Risk Prevalence for Overweight (2)




*National BRFSS Range 20.20 - 31.66%, Median 25.52%*

Table 5

# Prevalence of Overweight (1) by Selected Demographics

Alaska BRFSS 1993

| | n | % | N |
|---|---|---|---|
| **Gender** | | | |
| Male | 220 | 28.0 | 715 |
| Female | 273 | 28.8 | 819 |
| **Age** | | | |
| 18-24 | 33 | 23 | 145 |
| 25-34 | 105 | 23 | 414 |
| 35-44 | 143 | 26 | 464 |
| 45-54 | 94 | 37 | 251 |
| 55-64 | 46 | 39 | 109 |
| 65+ | 70 | 50 | 141 |
| Unknown/Refused | 2 | — | 10 |
| **Education** | | | |
| Never Attended School | 3 | ◆◆ | 12 |
| Elementary | 32 | 48 | 59 |
| Some High School | 41 | 32 | 120 |
| High School Graduate or GED | 176 | 31 | 510 |
| Some College or Technical School | 140 | 24 | 446 |
| College Graduate | 101 | 27 | 385 |
| Unknown/Refused | — | — | 2 |
| **Marital Status** | | | |
| Married | 281 | 29 | 865 |
| Divorced | 71 | 23 | 208 |
| Widowed | 31 | 61 | 61 |
| Separated | 18 | ◆◆ | 48 |
| Never Married | 72 | 24 | 274 |
| Unmarried Couple | 20 | 39 | 76 |
| Unknown/Refused | — | — | 2 |
| **Income** | | | |
| Less than $10,000 | 49 | 31 | 132 |
| $10,000-$14,999 | 37 | 36 | 94 |
| $15,000-$19,999 | 37 | 28 | 135 |
| $20,000-$24,999 | 37 | 18 | 123 |
| $25,000-$34,999 | 70 | 30 | 203 |
| $35,000-$50,000 | 91 | 30 | 290 |
| Over $50,000 | 141 | 29 | 441 |
| Unknown/Refused | 31 | 24 | 116 |
| **TOTAL** | **493** | **28.4** | **1,534** |

95% Confidence Interval (25.0 - 31.7%)

◆◆ = Not Reported

**n** = Number of respondents who are overweight based on percent of ideal weight.

**%** = This is a weighted percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

**N** = Total number of respondents in this subgroup. Total sample size = 1534.

Table 6

# Prevalence of Overweight (2) by Selected Demographics

Alaska BRFSS 1993

| | n | % | N |
|---|---|---|---|
| **Gender** | | | |
| Male | 192 | 23.9 | 715 |
| Female | 236 | 23.5 | 819 |
| **Age** | | | |
| 18-24 | 31 | 20 | 145 |
| 25-34 | 90 | 19 | 414 |
| 35-44 | 129 | 24 | 464 |
| 45-54 | 79 | 29 | 251 |
| 55-64 | 37 | 29 | 109 |
| 65+ | 60 | 40 | 141 |
| Unknown/Refused | 2 | — | 10 |
| **Education** | | | |
| Never Attended School | 4 | ◆◆ | 12 |
| Elementary | 29 | 44 | 59 |
| Some High School | 34 | 29 | 120 |
| High School Graduate or GED | 154 | 26 | 510 |
| Some College or Technical School | 123 | 19 | 446 |
| College Graduate | 84 | 22 | 385 |
| Unknown/Refused | — | — | 2 |
| **Marital Status** | | | |
| Married | 238 | 24 | 865 |
| Divorced | 60 | 16 | 208 |
| Widowed | 29 | 58 | 61 |
| Separated | 16 | ◆◆ | 48 |
| Never Married | 67 | 21 | 274 |
| Unmarried Couple | 18 | 38 | 76 |
| Unknown/Refused | — | — | 2 |
| **Income** | | | |
| Less than $10,000 | 40 | 26 | 132 |
| $10,000-$14,999 | 34 | 33 | 94 |
| $15,000-$19,999 | 37 | 23 | 135 |
| $20,000-$24,999 | 33 | 16 | 123 |
| $25,000-$34,999 | 57 | 22 | 203 |
| $35,000-$50,000 | 79 | 26 | 290 |
| Over $50,000 | 121 | 25 | 441 |
| Unknown/Refused | 27 | 18 | 116 |
| **TOTAL** | **428** | **23.7** | **1,534** |

95% Confidence Interval (20.6 - 26.8%)

◆◆ = Not Reported

**n** = Number of respondents who are overweight based on Body Mass Index (BMI).

**%** = This is a weighted percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

**N** = Total number of respondents in this subgroup. Total sample size = 1534.

# High Blood Pressure

## Health Risk

People with high blood pressure (hypertension) have three to four times the risk of developing coronary heart disease and as much as seven times the risk of a stroke as do those with normal blood pressures. Clinical trials show that blood pressure reduction significantly reduces stroke mortality. Recent long-term follow-up of the Hypertension Detection and Follow-up Program clinical trial suggests that blood pressure control can also help to reduce deaths from coronary heart disease.

Approximately 30% of adults have high blood pressure (blood pressure equal to or greater than 140mm Hg systolic and/or 90mm diastolic and/or taking antihypertensive medication).

## High Blood Pressure in Alaska

*Definition for this survey:*
*Hypertension (2): Respondents who report that they have been told they are hypertensive (have high blood pressure).*

An estimated 17.2% had ever been told by a doctor or other health professional that their blood pressure was high. (National BRFSS Range 16.76 to 29.84%, National BRFSS Median 21.73%.) Of Alaskan males, 14.6% reported having been told their blood pressure was high and of females, 20.1%.

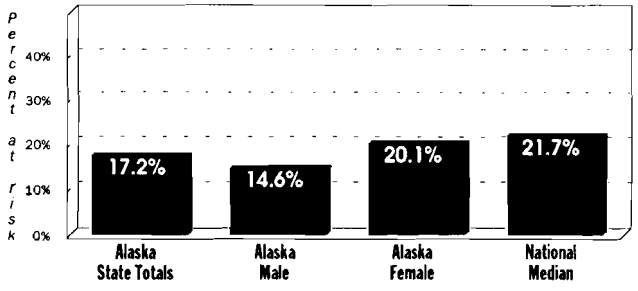
Of the persons who had been told that their blood pressure was high, 30% were told only once and 69% had been told more than once. Most (83.5%) adults had their blood pressure taken by a health professional within the past year.

### Year 2000 National Health Objectives

Increase to at least 90% the proportion of people with high blood pressure who are taking action to help control their blood pressure. (Objective 15.5)

(*Editorial note:* The BRFSS does not directly measure this objective. Actions to control high blood pressure include taking medication, dieting to lose weight, cutting down on salt and exercising.)

### Comparison of Risk Prevalence for Hypertension (2)




*National BRFSS Range 16.76 - 29.84%, Median 21.73%*

### At Risk for Hypertension (2)
**By age and gender**

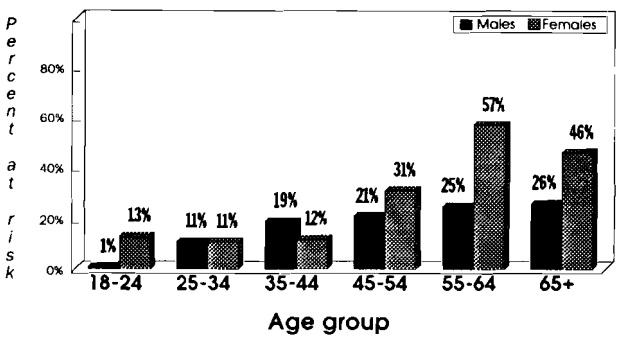


Table 7

# Prevalence of Hypertension (2) by Selected Demographics

Alaska BRFSS 1993

| | n | % | N |
|---|---|---|---|
| **Gender** | | | |
| Male | 132 | 14.6 | 715 |
| Female | 172 | 20.1 | 819 |
| **Age** | | | |
| 18-24 | 13 | 6 | 145 |
| 25-34 | 48 | 11 | 414 |
| 35-44 | 79 | 16 | 464 |
| 45-54 | 64 | 25 | 251 |
| 55-64 | 42 | 40 | 109 |
| 65+ | 54 | 36 | 141 |
| Unknown/Refused | 4 | ◆◆ | 10 |
| **Education** | | | |
| Never Attended School | 3 | ◆◆ | 12 |
| Elementary | 19 | 38 | 59 |
| Some High School | 31 | 18 | 120 |
| High School Graduate or GED | 91 | 16 | 510 |
| Some College or Technical School | 92 | 18 | 446 |
| College Graduate | 67 | 15 | 385 |
| Unknown/Refused | 1 | ◆◆ | 2 |
| **Marital Status** | | | |
| Married | 161 | 17 | 865 |
| Divorced | 47 | 16 | 208 |
| Widowed | 23 | 49 | 61 |
| Separated | 12 | ◆◆ | 48 |
| Never Married | 45 | 14 | 274 |
| Unmarried Couple | 16 | 29 | 76 |
| Unknown/Refused | — | — | 2 |
| **Income** | | | |
| Less than $10,000 | 36 | 19 | 132 |
| $10,000-$14,999 | 25 | 24 | 94 |
| $15,000-$19,999 | 26 | 17 | 135 |
| $20,000-$24,999 | 17 | 8 | 123 |
| $25,000-$34,999 | 38 | 18 | 203 |
| $35,000-$50,000 | 43 | 14 | 290 |
| Over $50,000 | 97 | 21 | 441 |
| Unknown/Refused | 22 | 15 | 116 |
| **TOTAL** | **304** | **17.2** | **1,534** |

95% Confidence Interval (14.5 - 20.0%)

◆◆ = Not Reported

**n** = Number of respondents who have been told they have high blood pressure.

**%** = This is a weighted percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

**N** = Total number of respondents in this subgroup. Total sample size = 1534.

# Alcohol Use

## Health Risk

Alcohol is implicated in nearly half of all deaths caused by motor vehicle crashes and fatal intentional injuries such as suicides and homicides; and victims are intoxicated in approximately one-third of all homicides, drownings, and boating deaths. Alcohol is the principal contributor to cirrhosis, which is the ninth leading cause of death in the United States. Alcohol use during pregnancy is the leading preventable cause of birth defects. Homeless alcohol abusers are at substantially increased risk of trauma, victimization, hypothermia, frostbite, and tuberculosis infection. Alcohol and other drug abuse may be both a cause and an effect of homelessness.

## Alcohol Use in Alaska

*Definitions used in this survey:*

***Acute (Binge) Drinking:*** *Respondents who report having five or more drinks on an occasion, one or more times in the past month.*

***Chronic Drinking:*** *Respondents who report an average of 60 or more alcoholic drinks a month. Drinking and Driving: Respondents who report having driven after having too much to drink, one or more times in the past month.*

An estimated 19.2% of Alaskan adults were reported as binge drinkers, engaged in acute drinking. This was one of the highest prevalence rates of acute drinking among the states participating in the BRFSS (National BRFSS Range 4.20 to 22.83%, National BRFSS Median 14.2 %). Of the males 26.1% were binge drinkers and of the females 11.5% were binge drinkers.

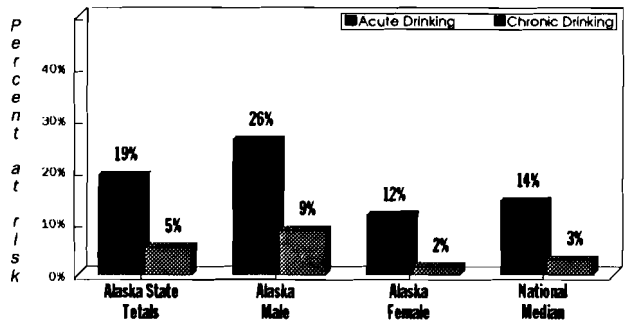
An estimated 5.3% of Alaskan adults were at risk for chronic drinking (National BRFSS Range 1.43 to 6.08%, National BRFSS Median 2.98%). Of males, 8.6% had more than 60 drinks during the past month and of females, 1.6%.

It is estimated that 2.5% of Alaskan adults engaged in drinking and driving (during the past month) and 4.7% had ridden with a drunk driver (during the past month).

### Year 2000 National Health Objectives

The Year 2000 Health Objectives relate to health status, risk reduction, and service and protection to reduce alcohol and other drug problems. The health objectives do not relate to alcohol consumption as defined by the 1993 BRFSS.

### Comparison of Risk Prevalence for Alcohol Use




*Acute: National BRFSS Range 4.20 - 22.83%, Median 14.2%*
*Chronic: National BRFSS Range 1.43 - 6.08%, Median 2.98%*

### At Risk for Acute Drinking Alaska
**By age and gender**

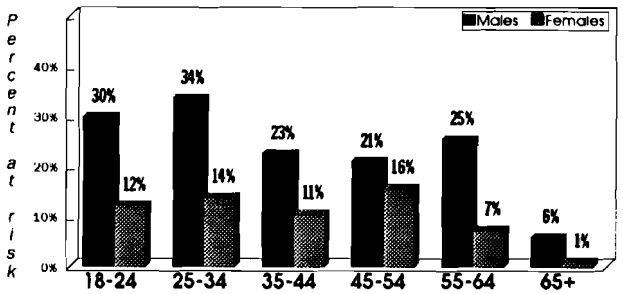


Table 8

# Prevalence of Acute (Binge) Drinking by Selected Demographics

Alaska BRFSS 1993

| | n | % | N |
|---|---|---|---|
| **Gender** | | | |
| Male | 186 | 26.1 | 715 |
| Female | 79 | 11.5 | 819 |
| **Age** | | | |
| 18-24 | 33 | 22 | 145 |
| 25-34 | 89 | 24 | 414 |
| 35-44 | 81 | 17 | 464 |
| 45-54 | 43 | 19 | 251 |
| 55-64 | 11 | 17 | 109 |
| 65+ | 6 | 3 | 141 |
| Unknown/Refused | 2 | ◆◆ | 10 |
| **Education** | | | |
| Never Attended School | 3 | ◆◆ | 12 |
| Elementary | 7 | 8 | 59 |
| Some High School | 29 | 26 | 120 |
| High School Graduate or GED | 91 | 22 | 510 |
| Some College or Technical School | 81 | 18 | 446 |
| College Graduate | 54 | 15 | 385 |
| Unknown/Refused | — | — | 2 |
| **Marital Status** | | | |
| Married | 120 | 15 | 865 |
| Divorced | 34 | 23 | 208 |
| Widowed | 8 | 13 | 61 |
| Separated | 12 | ◆◆ | 48 |
| Never Married | 67 | 28 | 274 |
| Unmarried Couple | 24 | 28 | 76 |
| Unknown/Refused | — | — | 2 |
| **Income** | | | |
| Less than $10,000 | 20 | 26 | 132 |
| $10,000-$14,999 | 12 | 15 | 94 |
| $15,000-$19,999 | 21 | 21 | 135 |
| $20,000-$24,999 | 28 | 30 | 123 |
| $25,000-$34,999 | 45 | 23 | 203 |
| $35,000-$50,000 | 53 | 19 | 290 |
| Over $50,000 | 71 | 16 | 441 |
| Unknown/Refused | 15 | 10 | 116 |
| **TOTAL** | **265** | **19.2** | **1,534** |

95% Confidence Interval (16.2 - 22.3%)

◆◆ = Not Reported

**n** = Number of respondents who have had five or more drinks on an occasion, one or more times in the past month.

**%** = This is a weighted percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

**N** = Total number of respondents in this subgroup. Total sample size = 1534.

Table 9

# Prevalence of Chronic Drinking by Selected Demographics

Alaska BRFSS 1993

| | n | % | N |
|---|---|---|---|
| **Gender** | | | |
| Male | 61 | 8.6 | 715 |
| Female | 17 | 1.6 | 819 |
| **Age** | | | |
| 18-24 | 5 | 3 | 145 |
| 25-34 | 21 | 6 | 414 |
| 35-44 | 23 | 5 | 464 |
| 45-54 | 20 | 8 | 251 |
| 55-64 | 2 | 1 | 109 |
| 65+ | 7 | 9 | 141 |
| Unknown/Refused | — | — | 10 |
| **Education** | | | |
| Never Attended School | — | — | 12 |
| Elementary | — | — | 59 |
| Some High School | 10 | 8 | 120 |
| High School Graduate or GED | 27 | 6 | 510 |
| Some College or Technical School | 24 | 6 | 446 |
| College Graduate | 17 | 4 | 385 |
| Unknown/Refused | — | — | 2 |
| **Marital Status** | | | |
| Married | 32 | 3 | 865 |
| Divorced | 12 | 11 | 208 |
| Widowed | 2 | 6 | 61 |
| Separated | 6 | ◆◆ | 48 |
| Never Married | 19 | 7 | 274 |
| Unmarried Couple | 7 | 11 | 76 |
| Unknown/Refused | — | — | 2 |
| **Income** | | | |
| Less than $10,000 | 6 | 6 | 132 |
| $10,000-$14,999 | 2 | 1 | 94 |
| $15,000-$19,999 | 6 | 8 | 135 |
| $20,000-$24,999 | 10 | 10 | 123 |
| $25,000-$34,999 | 16 | 7 | 203 |
| $35,000-$50,000 | 16 | 4 | 290 |
| Over $50,000 | 16 | 4 | 441 |
| Unknown/Refused | 6 | 7 | 116 |
| **TOTAL** | **78** | **5.3** | **1,534** |

95% Confidence Interval (3.7% - 7.0%)

◆◆ = Not Reported

**n** = Number of respondents who have had an average of 60 or more alcoholic drinks during the past month.

**%** = This is a weighted percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

**N** = Total number of respondents in this subgroup. Total sample size = 1534.

Table 10

# Prevalence of Drinking and Driving by Selected Demographics

Alaska BRFSS 1993

| | n | % | N |
|---|---|---|---|
| **Gender** | | | |
| Male | 25 | 3.2 | 715 |
| Female | 14 | 1.7 | 819 |
| **Age** | | | |
| 18-24 | 6 | 4 | 145 |
| 25-34 | 15 | 2 | 414 |
| 35-44 | 10 | 1 | 464 |
| 45-54 | 7 | 6 | 251 |
| 55-64 | — | — | 109 |
| 65+ | — | — | 141 |
| Unknown/Refused | 1 | ◆◆ | 10 |
| **Education** | | | |
| Never Attended School | — | — | 12 |
| Elementary | — | — | 59 |
| Some High School | 4 | 8 | 120 |
| High School Graduate or GED | 15 | 2 | 510 |
| Some College or Technical School | 9 | 2 | 446 |
| College Graduate | 11 | 2 | 385 |
| Unknown/Refused | — | — | 2 |
| Marital Status | | | |
| Married | 13 | 1 | 865 |
| Divorced | 6 | 2 | 208 |
| Widowed | — | — | 61 |
| Separated | 2 | ◆◆ | 48 |
| Never Married | 14 | 5 | 274 |
| Unmarried Couple | 4 | 6 | 76 |
| Unknown/Refused | — | — | 2 |
| **Income** | | | |
| Less than $10,000 | 1 | <1 | 132 |
| $10,000-$14,999 | 2 | 1 | 94 |
| $15,000-$19,999 | 1 | <1 | 135 |
| $20,000-$24,999 | 6 | 5 | 123 |
| $25,000-$34,999 | 7 | 3 | 203 |
| $35,000-$50,000 | 10 | 2 | 290 |
| Over $50,000 | 10 | 3 | 441 |
| Unknown/Refused | 2 | 1 | 116 |
| **TOTAL** | **39** | **2.5** | **1,534** |

95% Confidence Interval (1.4% - 3.6%)

◆◆ = Not Reported

**n** = Number of respondents who report having driven after having too much to drink, one or more times in the past month.

**%** = This is a weighted percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

**N** = Total number of respondents in this subgroup. Total sample size = 1534.

# Preventive Health Practices

## Overview

The effectiveness of preventive services in reducing disease and premature death is now well documented. There have been dramatic declines for stroke mortality, cervical cancer mortality, and childhood infectious diseases because of the widespread application of such preventive services as high blood pressure detection and control, pap tests, and childhood immunizations. Other preventive services such as mammography have also been shown to be effective.

Many Americans lack access to an ongoing source of primary care, and therefore, to essential clinical preventive services as well as to other health care.

Millions of Americans are without any form of health insurance and many more are underinsured. For a variety of reasons, in many areas, access to primary care is limited by an inadequate supply of primary care providers.

Even when access to primary care is not an issue, many preventive services are not offered by health care providers at regular intervals and few preventive services are covered under existing insurance plans despite their proven effectiveness in improving health.

# Health Care Coverage and Health Checkups in Alaska

It was estimated that 83.9% of Alaskan adults had some kind of health care plan. According to this survey, 16.1% of Alaskan adults did not (National BRFSS Range 5.94 to 22.20%, National BRFSS Median 12.90%).

Of the persons with no health care plan, 25% reported that they had not had health care coverage for over 5 years, 16% had not had health care coverage for two to less than five years, 14% had not had health care coverage for one to two years and 23% had not had health care coverage for less than one year.

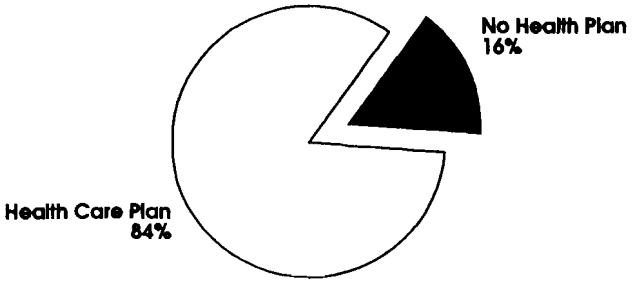
Of Alaskan adults, 80.5% reported that they had a usual place to go to if sick or needing advice about health. In total, 14.9% of Alaskan adults reported needing to see a doctor in the last year, but could not due to the cost. Of Alaskan females, 17.5% reported the same thing compared to 12.6% of Alaskan males.

In total, 62.4% of Alaskan adults had visited a doctor within the last year for a routine checkup (even though they were feeling well and had not been sick). Of Alaskan males, 51.5% had visited a doctor for a routine checkup in the last year compared to 74.8% of females.

**Year 2000 National Health Objectives**

Increase to at least 95 percent the proportion of people who have a specific source of ongoing primary care for coordination of their preventive and episodic health care. (Objective 21.3)

## Adults with No Health Care Plan




*National BRFSS Range 5.94 - 22.20%, Median 12.90%*

## Routine Checkup by a Doctor within the Past Year

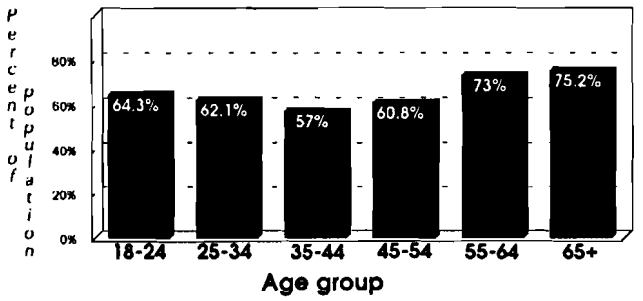


Table 11

# Prevalence of No Health Care Plan by Selected Demographics

Alaska BRFSS 1993

| | n | % | N |
|---|---|---|---|
| **Gender** | | | |
| Male | 131 | 20.6 | 715 |
| Female | 105 | 11.1 | 819 |
| **Age** | | | |
| 18-24 | 38 | 26 | 145 |
| 25-34 | 77 | 16 | 414 |
| 35-44 | 70 | 15 | 464 |
| 45-54 | 33 | 16 | 251 |
| 55-64 | 12 | 12 | 109 |
| 65+ | 5 | 4 | 141 |
| Unknown/Refused | 1 | ◆◆ | 10 |
| **Education** | | | |
| Never Attended School | 1 | ◆◆ | 12 |
| Elementary | 3 | 5 | 59 |
| Some High School | 25 | 24 | 120 |
| High School Graduate or GED | 103 | 22 | 510 |
| Some College or Technical School | 70 | 13 | 446 |
| College Graduate | 34 | 11 | 385 |
| Unknown/Refused | — | — | 2 |
| **Marital Status** | | | |
| Married | 87 | 9 | 865 |
| Divorced | 47 | 31 | 208 |
| Widowed | 6 | 9 | 61 |
| Separated | 11 | ◆◆ | 48 |
| Never Married | 62 | 21 | 274 |
| Unmarried Couple | 23 | 52 | 76 |
| Unknown/Refused | — | — | 2 |
| **Income** | | | |
| Less than $10,000 | 33 | 24 | 132 |
| $10,000-$14,999 | 19 | 23 | 94 |
| $15,000-$19,999 | 34 | 23 | 135 |
| $20,000-$24,999 | 25 | 25 | 123 |
| $25,000-$34,999 | 42 | 19 | 203 |
| $35,000-$50,000 | 42 | 17 | 290 |
| Over $50,000 | 26 | 8 | 441 |
| Unknown/Refused | 15 | 12 | 116 |
| **TOTAL** | **236** | **16.1** | **1,534** |

95% Confidence Interval (13.3 - 18.9%)

◆◆ = Not Reported

**n** = Number of persons who report having no kind of health care plan.

**%** = This is a weighted percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

**N** = Total number of respondents in this subgroup. Total sample size = 1534.

# Pneumonia and Influenza Immunizations

## Health Risk

Pneumococcal pneumonia infects the lungs, causes difficulty in breathing and can be fatal. Older persons are two to three times more likely to get this type of pneumonia than the general population. In Alaska, immunization is recommended for anyone 55 years of age and over and for those of any age with certain chronic illnesses. In Alaska, a routine six year booster is recommended for individuals who receive a pneumococcal vaccination.

Influenza (flu) can be dangerous to the elderly, those who are debilitated, and those with heart or lung disease because it lowers the person's resistance to other infections that may be fatal. The elderly are most likely to be seriously ill or to die from the flu or related complications.

People over 65 years old and those with chronic illnesses should be vaccinated each year in the fall or early winter.

## Immunizations in Alaska

Among Alaskan adults aged 65 and older, 53% had a flu shot in the past twelve months. Among males (65 and older) 55% had one in the past twelve months and among females (65 and older) 52% had one in past twelve months.

Among Alaskan adults aged 65 and older, 31% had ever had a pneumonia vaccination. Among males (65 and older) 29% had ever had a pneumonia vaccination and among females (65 and older) 33% had ever had one.

### Year 2000 National Health Objectives

Increase pneumococcal pneumonia and influenza immunization among institutionalized chronically ill or older people: at least 80%. (Objective 20.11)

# Cholesterol Screening

## Health Risk

High blood cholesterol is a major risk factor for coronary heart disease, the leading cause of death in the United States. It is recommended by the National Cholesterol Education Program that blood cholesterol should be measured in all adults 20 years of age and above at least once every five years and more often for patients diagnosed with high cholesterol.

### Classification of Total Cholesterol Levels

< 200 mg/dl ..... Desirable Blood Cholesterol

200 to 239 mg/dl ..... Borderline High Cholesterol

≥ 240 mg/dl ..... High Blood Cholesterol

## Cholesterol Screening in Alaska

*Definition used in this survey: Respondents who report they have had their blood cholesterol checked within the past five years.*

Only 62.1% of Alaskan adults reported having their blood cholesterol checked within the past five years (National BRFSS Range 57.04 to 73.43%, National BRFSS Median 65.02%). It was estimated that 31.9% of Alaskan adults had *never* had their blood cholesterol checked.

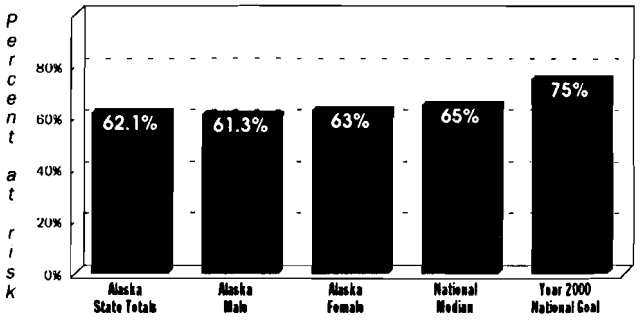
Of those persons that had ever had their blood cholesterol checked, 28% reported having been told their blood cholesterol was high.

### Year 2000 National Health Objectives

Increase to at least 75% the proportion of adults who have ever had their blood cholesterol checked within the preceding five years. (Objective 15.14)

Increase to at least 60% the proportion of adults with high blood cholesterol who are aware of their condition and are taking action to reduce their blood cholesterol to recommended levels. (Objective 15.8)

## Comparison of Prevalence of Cholesterol Screening




*National BRFSS Range 57.04 - 73.43%, Median 65.02%*

## Prevalence of Cholesterol Screening

### By age and gender

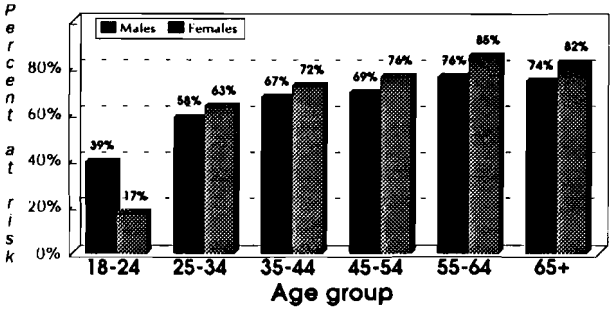


Table 12

# Prevalence of Cholesterol Screening by Selected Demographics

Alaska BRFSS 1993

| | n | % | N |
|---|---|---|---|
| **Gender** | | | |
| Male | 406 | 61.3 | 715 |
| Female | 515 | 63.0 | 819 |
| **Age** | | | |
| 18-24 | 33 | 29 | 145 |
| 25-34 | 215 | 60 | 414 |
| 35-44 | 286 | 69 | 464 |
| 45-54 | 190 | 72 | 251 |
| 55-64 | 86 | 80 | 109 |
| 65+ | 105 | 78 | 141 |
| Unknown/Refused | 6 | ◆◆ | 10 |
| **Education** | | | |
| Never Attended School | 5 | ◆◆ | 12 |
| Elementary | 30 | 51 | 59 |
| Some High School | 57 | 44 | 120 |
| High School Graduate or GED | 258 | 55 | 510 |
| Some College or Technical School | 283 | 66 | 446 |
| College Graduate | 286 | 74 | 385 |
| Unknown/Refused | 2 | ◆◆ | 2 |
| **Marital Status** | | | |
| Married | 541 | 66 | 865 |
| Divorced | 143 | 64 | 208 |
| Widowed | 41 | 71 | 61 |
| Separated | 23 | ◆◆ | 48 |
| Never Married | 135 | 51 | 274 |
| Unmarried Couple | 36 | 53 | 76 |
| Unknown/Refused | 2 | ◆◆ | 2 |
| **Income** | | | |
| Less than $10,000 | 57 | 40 | 132 |
| $10,000-$14,999 | 50 | 62 | 94 |
| $15,000-$19,999 | 69 | 53 | 135 |
| $20,000-$24,999 | 59 | 42 | 123 |
| $25,000-$34,999 | 107 | 57 | 203 |
| $35,000-$50,000 | 184 | 65 | 290 |
| Over $50,000 | 339 | 78 | 441 |
| Unknown/Refused | 56 | 54 | 116 |
| **TOTAL** | **921** | **62.1** | **1,534** |

95% Confidence Interval (58.5 - 65.7%)

◆◆ = Not Reported

**n** = Number of respondents who had their cholesterol checked within the past five years.

**%** = This is a weighted percentage of the state population (adult) at risk in this demographic subgroup, based on the survey data.

**N** = Total number of respondents in this subgroup. Total sample size = 1534.

# Blood Pressure Screening

## Health Risk Implications

People with high blood pressure (hypertension) have three to four times the risk of developing coronary heart disease and as much as seven times the risk of a stroke as do those with normal blood pressures. Clinical trials show that blood pressure reduction significantly reduces stroke mortality. Recent long-term follow-up of the Hypertension Detection and Follow-up Program clinical trial suggests that blood pressure control can also help to reduce deaths from coronary heart disease.

Approximately 30% of adults have high blood pressure (blood pressure equal to or greater than 140mm Hg systolic and/or 90mm diastolic and/or taking antihypertensive medication).

## Blood Pressure Screening in Alaska

*Definition for this survey:*
*Hypertension (1): Respondents who report they have had their blood pressure checked within the past two years.*

It was estimated that 92.5% of Alaskan adults had their blood pressure checked by a health professional within the past two years (National BRFSS Range 90.25 to 96.54%, National BRFSS Median 93.52%). Of Alaskan females, 96% had their blood pressure checked within the past two years and 90% of Alaskan males had their blood pressure checked within the past two years.

Among Alaskan adults, 83.5% reported having their blood pressure checked within the past year. More Alaskan females (89.7%) had their blood pressure checked within the last year than males (78.1%).

### Year 2000 National Health Objectives

Increase to at least 90% the proportion of adults who have had their blood pressure measured within the preceding two years and can state whether their blood pressure was normal or high. (Objective 15.13)

Table 13

# Prevalence of Blood Pressure Screening by Selected Demographics

Alaska BRFSS 1993

| | n | % | N |
|---|---|---|---|
| **Gender** | | | |
| Male | 631 | 89.6 | 715 |
| Female | 779 | 95.8 | 819 |
| **Age** | | | |
| 18-24 | 143 | 99 | 145 |
| 25-34 | 376 | 93 | 414 |
| 35-44 | 414 | 91 | 464 |
| 45-54 | 234 | 87 | 251 |
| 55-64 | 104 | 93 | 109 |
| 65+ | 129 | 92 | 141 |
| Unknown/Refused | 10 | ◆◆ | 10 |
| **Education** | | | |
| Never Attended School | 11 | ◆◆ | 12 |
| Elementary | 55 | 96 | 59 |
| Some High School | 107 | 83 | 120 |
| High School Graduate or GED | 471 | 93 | 510 |
| Some College or Technical School | 409 | 94 | 446 |
| College Graduate | 355 | 92 | 385 |
| Unknown/Refused | 2 | ◆◆ | 2 |
| **Marital Status** | | | |
| Married | 804 | 93 | 865 |
| Divorced | 186 | 85 | 208 |
| Widowed | 55 | 87 | 61 |
| Separated | 44 | ◆◆ | 48 |
| Never Married | 251 | 94 | 274 |
| Unmarried Couple | 68 | 91 | 76 |
| Unknown/Refused | 2 | ◆◆ | 2 |
| **Income** | | | |
| Less than $10,000 | 115 | 85 | 132 |
| $10,000-$14,999 | 86 | 93 | 94 |
| $15,000-$19,999 | 118 | 89 | 135 |
| $20,000-$24,999 | 113 | 86 | 123 |
| $25,000-$34,999 | 185 | 93 | 203 |
| $35,000-$50,000 | 271 | 96 | 290 |
| Over $50,000 | 422 | 95 | 441 |
| Unknown/Refused | 100 | 89 | 116 |
| **TOTAL** | **1410** | **92.5** | **1,534** |

95% Confidence Interval (90.5 - 94.5%)

◆◆ = Not Reported

**n** = Number of persons who have had their blood pressure checked within the past two years.

**%** = This is a weighted percentage of the state population (adult) screened in this demographic subgroup, based on the survey data.

**N** = Total number of respondents in this subgroup. Total sample size = 1534.

# Breast Cancer Screening

## Health Risk

Breast cancer is the second leading cause of cancer death among women and accounts for nearly a third of all cancers in women. Approximately one woman in every nine will develop breast cancer in her lifetime.

The National Cancer Institute reports that there is general consensus among experts that routine screening every year with mammography and clinical breast examination can reduce breast cancer mortality by about one third for women ages 50 and older. Experts do not agree on the role of mammography for women ages 40 - 49. To date, randomized clinical trials have not shown a statistically significant reduction in mortality for women under the age of 50. Annual clinical breast exam is recommended for women beginning at age 40.

## Breast Cancer Screening in Alaska

***Clinical Breast Exams:*** *A clinical breast exam is when the breast is felt for lumps by a doctor or other medical professional.* Of women aged 18 and older, 94.3% had ever had a clinical breast exam. Of those women who had ever had a breast exam, 75.4% had one within the past year and an additional 15.4% had one in the previous year.

***Mammography:*** *A mammogram is an x-ray of the breast to look for cancer.* Of women aged 40 and older, 81% had ever had a mammogram (National BRFSS Range 68.48 to 85.66%, National BRFSS Median 77.88%).

Of all the women 18 and older, 47.5% had ever had a mammogram. Of those women 18 and older who ever had a mammogram, 83% reported their last one was done as part of a routine checkup, 15% reported it was done because of a breast problem and 1% because they had breast cancer.

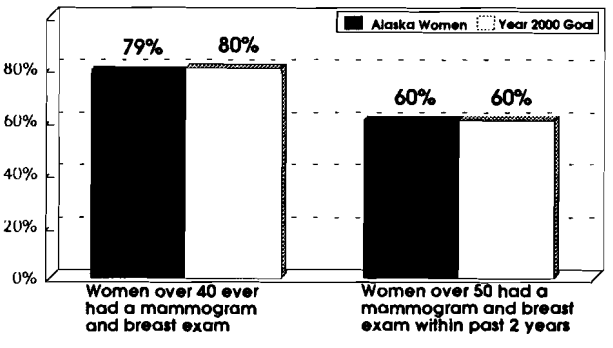
In 1993, 79% of women 40 and older, had ever had both a mammogram and a breast exam. Of the women 50 and older, 60% had a mammogram and a breast exam in the past two years.

### Year 2000 National Health Objectives

Increase to at least 80% the proportion of women aged 40 and older who have ever received a clinical breast exam and a mammogram, and to at least 60% those aged 50 and older who have received them within the preceding one to two years. (Objective 16.11)

### Mammography and Breast Exams

**By age and gender**



# Cervical Cancer Screening

## Health Risk

Cervical cancer now kills an estimated 4,400 women annually in the United States, and about 13,500 new cases of cervical cancer are diagnosed each year. The incidence of invasive cervical cancer has steadily decreased over the years. Cervical carcinoma in situ, (a precancerous condition) is now more frequent than invasive cancer, especially in women under 50. The pap test is highly effective in detecting early cancer of the uterine cervix and greatly reduces the risk of mortality from invasive cervical cancer.

The National Cancer Institute recommends an annual pelvic examination with a pap test for all women who are or who have been sexually active, or who have reached age 18; and less frequent exams after three consecutive normal exams at the discretion of the physician.

## Cervical Cancer Screening in Alaska

*Definition for this survey: Females with intact cervix-uteri who report they have had a pap smear within the past three years.*

Of Alaskan females aged 18 and older (with intact cervix-uteri), 95.9% had ever had a pap test (National BRFSS Range 84.26 to 96.58%, National BRFSS Median 93.67%) and 87.2% had one within in last two years (National BRFSS Range 71.62 - 87.22%, National BRFSS Median 79.86%). According to this definition, 89.5% of women ages 18 and older (with intact cervix-uteri) had a pap test within the past three years.

Of the women aged 18 and older who had ever had a pap test, 74.5% were in the last year, 13.7% in the last one to two years, 5.6% within the past two to five years and 5.5% were over five years ago.

### Year 2000 National Health Objectives

Increase to at least 95% the proportion of women aged 18 and older with uterine cervix who have ever received a pap test, and to at least 85% those who received a pap test within the preceding one to three years. (Objective 16.12)

# Colorectal Cancer Screening

## Health Risk

In 1995, an estimated 55,300 Americans will die from cancers of the colon or rectum and 138,200 new cases will be diagnosed. With early detection and treatment improvements, stage specific survival rates for cancers of the colon and rectum have been improving.

Digital rectal examination, stool blood test, and proctosigmoidoscopy are recommended by the National Cancer Institute to detect colon or rectum cancer in patients without symptoms. A digital rectal examination by a physician during an office visit should be performed every year after the age of 40; the stool blood test is recommended every year after the age of 50; and sigmoidoscopy is recommended every three to five years after the age of 50.

## Colorectal Cancer Screening in Alaska

***Digital rectal exam:*** *A digital rectal exam is when a doctor or other health professional inserts a finger in the rectum to check for cancer and other problems.*

Of Alaskan adults aged 40 and older, 91.9% had ever had a digital rectal exam. Almost half (43.5%) had one in the past year (National BRFSS Range 24.46 - 51.58%, National BRFSS Median 39.79%), 18.1% had one in the past one to five years, 11.9% had one over five years ago and 17.3% had never had one.

***Proctoscopic exam:*** *A proctoscopic exam is when a tube is inserted in the rectum to check for cancer and other health problems.*

Of Alaskan adults aged 40 and older, 26.6% had ever had a proctoscopic exam. Of those aged 50 and older, 37% had ever had a proctoscopic exam (National BRFSS Range 25.59 - 51.46%, National BRFSS Median 36.84%).

### Year 2000 National Health Objectives

Increase to at least 50% the proportion of people aged 50 and older who have received fecal occult blood testing within the preceding 1 to 2 years, and to at least 40 percent those who have ever received proctosigmoidoscopy. (Objective 16.13)

(*Editorial note:* The BRFSS does not directly measure this Year 2000 Objective as it does not differentiate between a proctoscopic exam and a proctosigmoidoscopy.)

# HIV/AIDS Beliefs and Opinions

An estimated one million people in the United States are presently infected with HIV (human immunodeficiency virus); and approximately 40,000 are infected yearly in recent years. HIV and AIDS (acquired immunodeficiency syndrome) are a growing threat to the health of the nation and will continue to make major demands on health and social service systems for many decades.

Through December 31, 1994, 272 Alaskans had been confirmed to have AIDS. Of these, 152 were known to have died. Data from HIV antibody testing conducted through the State Section of Laboratories through December 31, 1994, showed that 540 (0.7%) of the 75,826 persons voluntarily tested were positive for HIV infection. Of the 12,919 individuals screened in Alaska between October 1985 and September 1994, as part of their entrance evaluation into military duty or reserve service, 3 (0.02%) tested positive.

AIDS information and education programs have increased public knowledge and influenced attitudes about HIV and AIDS. However, some misinformation about transmission of HIV still persists at all levels of society. An important step toward reducing the spread of HIV behaviors is for people to be able to use information about how HIV is transmitted to assess their own risk of becoming infected. When people can recognize their risks, they can learn ways to change their behavior and reduce their risk.

## Behavioral Risk Factor Survey

In 1993, only the survey respondents aged 18-64 were asked the HIV and AIDS questions. Most Alaskan adults (94.9%) knew that you can not tell by looking at a person if he or she has the AIDS virus. Almost half (48.4%) were aware that there is medical treatment that may prolong the life of a person infected with the AIDS virus. The majority of adults (69.5%) would be willing to work with a person who has the AIDS virus and 66.3% would allow their child to be in the same classroom with a child who is infected with the AIDS virus.

Over half (56.3%) of Alaskan adults believed that a condom is somewhat effective in preventing getting the AIDS virus through sexual activity and 27.7% thought that it is very effective. Most (93%) adults said that if they had a sexually active teenager, they would encourage him or her to use a condom.

Most (88.4%) Alaskan adults believed their chances of getting the AIDS virus was low or none. Most (60.4%) Alaskan adults thought that their chances of getting the AIDS virus had stayed the same in the past five years, 18.1% thought their chances had increased during the past five years and 16.1% thought their chances had decreased during the past five years.

Except for donating blood, 38.4% of Alaskan adults had been tested for the AIDS virus infection. Of the persons tested, 27% were tested for reasons of military service and 31% were tested at a military site. Of the persons tested, 26% reported receiving counseling after getting the blood test results.

# Alaskan Beliefs and Opinions About AIDS ◆

*Can you tell by looking at a person if he or she has the AIDS virus?*

Yes ..... 2.4%
No ..... 94.9%
Unknown/Refused ..... 2.7%

*Would you be willing to work next to or near a person you know is infected with the AIDS virus?*

Yes ..... 69.5%
No ..... 16.2%
Unknown/Refused ..... 14.2%

*Would you allow your child to be in the same classroom with a child who is infected with the AIDS virus?*

Yes ..... 66.3%
No ..... 12.9%
(National BRFSS Range 4.50 - 22.60%, National Median 12.16%)
Unknown/Refused ..... 20.7%

*If you had a sexually active teenager, would you encourage him or her to use a condom?*

Yes ..... 93.0%
(National BRFSS Range 85.68 - 94.85%, National Median 91.75%)
No ..... 1.3%
Unknown/Refused ..... 5.7%

*How effective do you think using a condom is in preventing getting the AIDS virus through sexual activity?*

Very effective ..... 27.7%
(National BRFSS Range 17.70 - 39.23%, National Median 25.53%)
Somewhat effective ..... 56.3%
Not at all effective ..... 7.2%
Did not know how effective .. 7.5%
Unknown/Refused ..... 1.3%

*Do you know if there is a medical treatment that may prolong the life of a person infected with the AIDS virus?*

Yes ..... 48.4%
No ..... 31.1%
Unknown/Refused ..... 20.5%

*What are your chances of getting the AIDS virus?*

High ..... 1.6%
(National BRFSS Range 0.76 - 3.82%, National Median 2.09%)
Medium ..... 6.8%
Low ..... 42.6%
None ..... 45.8%
Unknown/Refused ..... 3.2%

*In the past five years, have your chances of getting the AIDS virus, increased, decreased or stayed the same?*

Increased ..... 18.6%
Decreased ..... 16.1%
Stayed the Same ..... 60.4%
Unknown/Refused ..... 4.9%

◆ *Denominator equals 1,393 respondents aged 18-64.*

*Except for donating blood, have you ever had your blood tested for the AIDS virus infection?*

Yes ..... 38.4%
(National BRFSS Range 15.12 - 39.50%, National Median 24.99%)

No ..... 59.3%
Unknown/Refused ..... 2.3%

*When was your last test?* (of 461 respondents tested)

1980 - 1987 ..... 2.4%
1988 - 1991 ..... 36.2%
1992 - 1993 ..... 50.4%
Unknown/Refused ..... 11.0%

*Did you receive counseling after getting the results of your last test?* (of 461 respondents tested)

Yes ..... 26%
No ..... 70%
Did not get results ..... 4%

*What was the main reason you had your last AIDS blood test?* (of 461 respondents tested)

Military ..... 27%
To see if infected ..... 24%
Routine checkup ..... 8%
Insurance ..... 7%
Hospitalization ..... 6%
Employment ..... 5%
Referral ..... 3%
Marriage license ..... 2%
Occupational exposure ..... 2%
Blood donation process ..... 1%
Illness ..... 1%
Immigration ..... 1%
Other ..... 11%
Unknown/ Refused ..... 2%

## ***Where did you have your last blood test for the AIDS virus?*** *(461 respondents)*

Military site ..... 31%
Private doctor ..... 22%
Hospital or emergency room ..... 17%
Health department or other public clinic ..... 8%
Community health clinic ..... 6%
Family planning or prenatal clinic ..... 4%
Insurance or company clinic ..... 3%
AIDS or STD clinic ..... 2%
At home/health worker ..... 2%
Other ..... 7%

# Injury Control and Child Safety

During the first four decades of life, unintentional injuries claim more lives than infectious or chronic diseases. In 1987, 2.3 million years of life were prematurely taken by unintentional injuries, more than from any other cause. Nationally, American Indians and Alaska Natives have disproportionately higher death rates from motor vehicle crashes, residential fires, and drowning.

Unintentional injuries were the third leading cause of death in Alaska in 1993. During 1980 to 1985 Alaska children aged 0 to 14 years died from injuries at the highest rate in the nation.

## Behavioral Risk Factor Survey

*How often does the oldest child (between the age of 5 and 14) use a safety belt?*
(number of respondents = 540)

| | |
|---|---|
| Always | 78.5% |
| Nearly Always | 8.1% |
| Sometimes | 3.8% |
| Seldom or never | 5.9% |
| Unknown | 0.9% |
| Never ride in a car | 2.9% |

*How often does the oldest child (under the age of 4) use a car safety seat?*
(number of respondents = 156)

| | |
|---|---|
| Always | 90% |
| Nearly always | 3% |
| Sometimes | 1% |
| Seldom or never | 4% |
| Never ride in a car | 1% |
| Unknown | 1% |

*Can you swim or tread water for 5 minutes in water that is over your head?*

| | |
|---|---|
| Yes | 82.7% |
| No | 14.3% |
| Unknown | 2.9% |

*Do you have a specific plan for how you would escape from your house or apartment in case of fire?*

| | |
|---|---|
| Yes | 81.4% |
| No | 18.2% |
| Unknown | 0.5% |

# Risks by Region

This section provides summary tables of the prevalence of behavioral health risks for each of the four BRFSS regions (strata) in Alaska (see Appendix B). This section also provides a comparison of risk factors by region (strata).

Please note the following:

- Prevalence estimates for each strata are weighted to the 18 and older population of the respective strata (see Appendix C).
- Prevalence estimates are based on denominators of less than 500 (approximately 384) and are therefore rounded to the nearest whole percent.
- It is important to consider the confidence intervals when comparing prevalence estimates. Generally speaking, the smaller the sample size, the wider the range of values within which the true prevalence is believed to be.

## Definitions for Tables 14 – 24

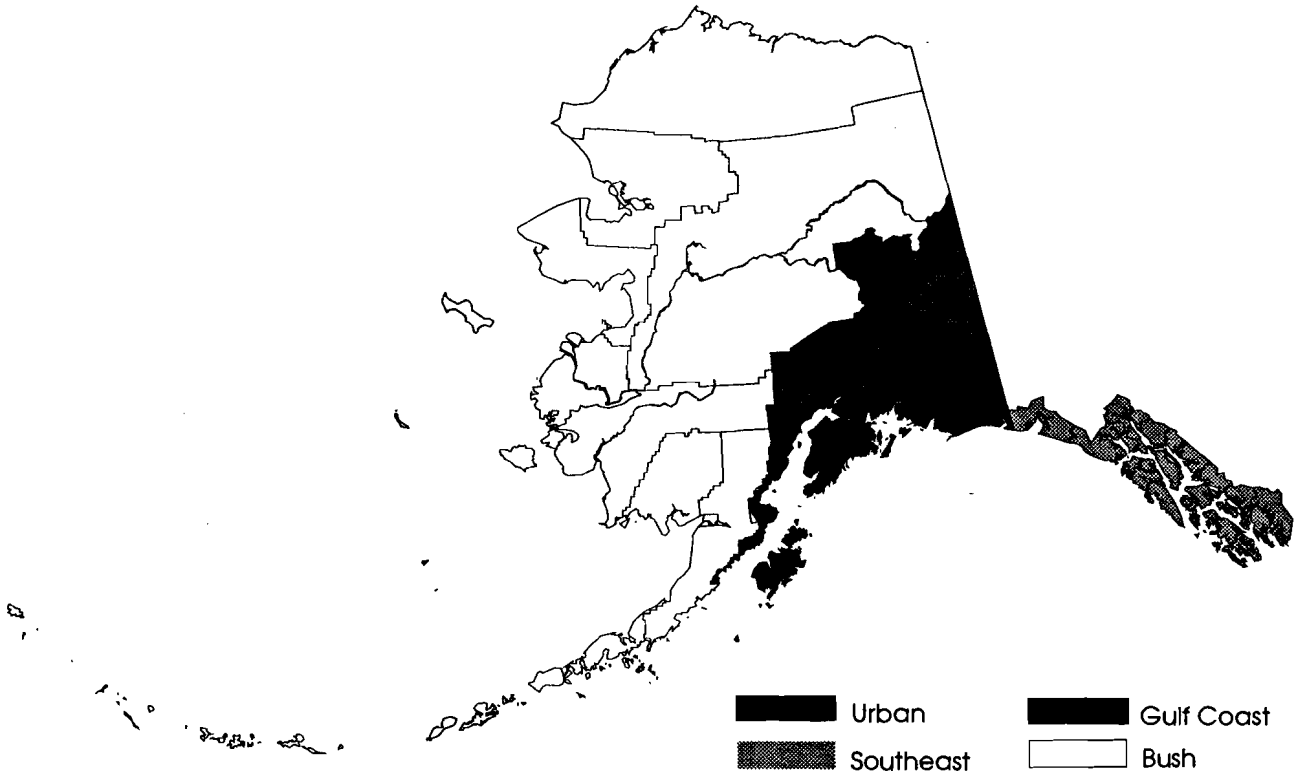
**n** = Number of respondents at risk.

**%** = This is a weighted percentage of the strata population at risk in this demographic subgroup, based on the survey data.

**N** = Total number of respondents in this subgroup, in this strata.

**95% C.I.**=95% Confidence Interval. The range of values within which the true value of a prevalence estimate would be expected to fall within, 95% of the time.

# 1993 BRFSS Sampling Regions




**The Alaska sample was stratified into four regions based on common demographics:•**

| | Total Population•• | Population 18 years and older | Number of interviews conducted |
|---|---|---|---|
| **Urban** (Strata 1)<br>Anchorage, Fairbanks & vicinity | 349,654 | 242,103 | 384 |
| **Gulf Coast** (Strata 2)<br>Kenai, Kodiak, Valdez, Cordova & vicinity | 64,063 | 43,574 | 384 |
| **Southeast** (Strata 3)<br>All of Southeast Alaska | 68,989 | 48,103 | 381 |
| **Bush** (Strata 4)<br>All other nonurban areas of Alaska | 67,337 | 43,393 | 385 |
| STATEWIDE TOTAL | **550,043** | **377,173** | **1,534** |

• See Appendix B

•• 1990 Census Population

Table 14

# Regional Summary
# Prevalence of Select Risk Factors
# Urban (Strata 1)

| Risk Factor | n | % | N | 95% C.I. |
|---|---|---|---|---|
| **Safety Belt Nonuse (3)** | | | | |
| Male | 76 | 44 | 175 | 35.5 - 51.9 |
| Female | 37 | 18 | 209 | 12.3 - 23.5 |
| Total | 113 | 31 | 384 | 26.1 - 36.6 |
| **Current Smoking** | | | | |
| Male | 46 | 25 | 175 | 17.9 - 31.8 |
| Female | 49 | 25 | 209 | 18.3 - 31.4 |
| Total | 95 | 25 | 384 | 20.0 - 29.6 |
| **Overweight (2)** | | | | |
| Male | 39 | 22 | 175 | 14.8 - 28.6 |
| Female | 47 | 20 | 209 | 14.4 - 25.7 |
| Total | 86 | 21 | 384 | 16.4 - 25.4 |
| **Hypertension (2)** | | | | |
| Male | 28 | 14 | 175 | 8.2 - 19.5 |
| Female | 46 | 20 | 209 | 14.2 - 25.7 |
| Total | 74 | 17 | 384 | 12.7 - 20.8 |
| **Acute (Binge) Drinking** | | | | |
| Male | 41 | 25 | 175 | 18.0 - 32.3 |
| Female | 22 | 12 | 209 | 7.1 - 17.6 |
| Total | 63 | 19 | 384 | 14.5 - 23.6 |
| **Chronic Drinking** | | | | |
| Male | 15 | 8 | 175 | 3.9 - 12.4 |
| Female | 3 | 1 | 209 | 0.0 - 3.1 |
| Total | 18 | 5 | 384 | 2.6 - 7.3 |
| **No Health Care Plan** | | | | |
| Male | 36 | 21 | 175 | 14.5 - 27.9 |
| Female | 20 | 9 | 209 | 4.7 - 12.8 |
| Total | 56 | 15 | 384 | 11.2 - 19.3 |

Table 17

# Regional Summary
# Prevalence of Select Risk Factors
# Bush (Strata 4)

| Risk Factor | n | % | N | 95% C.I. |
|---|---|---|---|---|
| **Safety Belt Nonuse (3)** | | | | |
| Male | 91 | 54 | 194 | 45.5 - 62.8 |
| Female | 89 | 47 | 191 | 37.9 - 55.6 |
| Total | 180 | 51 | 385 | 44.8 - 57.3 |
| **Current Smoking** | | | | |
| Male | 67 | 37 | 194 | 28.4 - 45.7 |
| Female | 62 | 27 | 191 | 19.9 - 33.6 |
| Total | 129 | 33 | 385 | 26.8 - 38.6 |
| **Overweight (2)** | | | | |
| Male | 47 | 27 | 194 | 18.5 - 35.3 |
| Female | 73 | 38 | 191 | 28.9 - 46.5 |
| Total | 120 | 31 | 385 | 25.3 - 37.6 |
| **Hypertension (2)** | | | | |
| Male | 34 | 12 | 194 | 7.6 - 16.7 |
| Female | 39 | 18 | 191 | 12.1 - 24.1 |
| Total | 73 | 15 | 385 | 10.9 - 18.3 |
| **Acute (Binge) Drinking** | | | | |
| Male | 55 | 26 | 194 | 18.7 - 32.9 |
| Female | 15 | 8 | 191 | 3.5 - 12.0 |
| Total | 70 | 18 | 385 | 13.7 - 22.8 |
| **Chronic Drinking** | | | | |
| Male | 14 | 8 | 194 | 3.2 - 11.8 |
| Female | 3 | 1 | 191 | 0.0 - 2.2 |
| Total | 17 | 5 | 385 | 2.2 - 7.4 |
| **No Health Care Plan** | | | | |
| Male | 25 | 16 | 194 | 8.4 - 23.8 |
| Female | 16 | 13 | 191 | 4.4 - 21.2 |
| Total | 41 | 15 | 385 | 9.0 - 20.4 |

Table 18

# Safety Belt Nonuse (3) by Region

| Region | n | % | N | 95% C.I. |
|---|---|---|---|---|
| **Urban** (Strata 1) | | | | |
| Male | 76 | 44 | 175 | 35.5 - 51.9 |
| Female | 37 | 18 | 209 | 12.3 - 23.5 |
| Total | 113 | 31 | 384 | 26.1 - 36.6 |
| **Gulf Coast** (Strata 2) | | | | |
| Male | 85 | 46 | 178 | 37.5 - 54.2 |
| Female | 76 | 38 | 206 | 30.5 - 44.8 |
| Total | 161 | 42 | 384 | 36.5 - 47.7 |
| **Southeast** (Strata 3) | | | | |
| Male | 84 | 50 | 168 | 42.0 - 58.3 |
| Female | 61 | 29 | 213 | 22.2 - 35.5 |
| Total | 145 | 40 | 381 | 34.7 - 45.5 |
| **Bush** (Strata 4) | | | | |
| Male | 91 | 54 | 194 | 45.5 - 62.8 |
| Female | 89 | 47 | 191 | 37.9 - 55.6 |
| Total | 180 | 51 | 385 | 44.8 - 57.3 |

## Comparison of Risk Prevalence for Safety Belt Nonuse (3) by Region

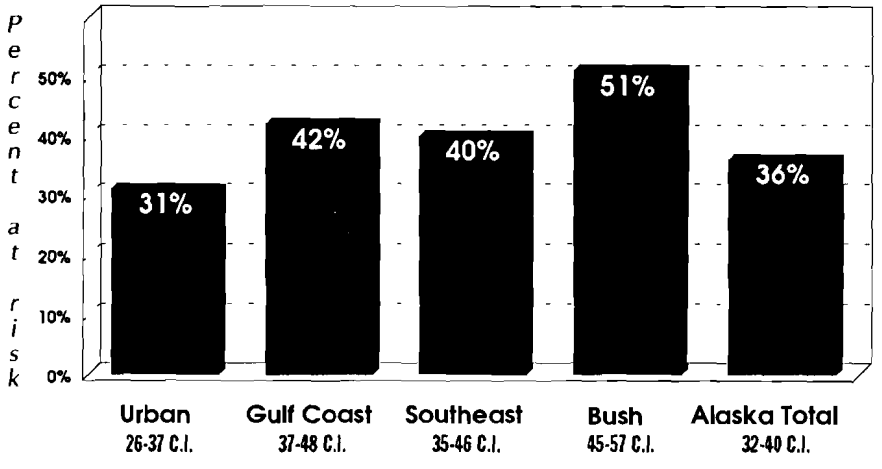


Table 19

## Current Smoking by Region

| Region | n | % | N | 95% C.I. |
|---|---|---|---|---|
| **Urban** (Strata 1) | | | | |
| Male | 46 | 25 | 175 | 17.9 - 31.8 |
| Female | 49 | 25 | 209 | 18.3 - 31.4 |
| Total | 95 | 25 | 384 | 20.0 - 29.6 |
| **Gulf Coast** (Strata 2) | | | | |
| Male | 50 | 26 | 178 | 19.2 - 33.2 |
| Female | 59 | 28 | 206 | 21.0 - 34.3 |
| Total | 109 | 27 | 384 | 22.0 - 31.7 |
| **Southeast** (Strata 3) | | | | |
| Male | 57 | 37 | 168 | 28.8 - 44.9 |
| Female | 49 | 22 | 213 | 16.4 - 28.3 |
| Total | 106 | 30 | 381 | 24.8 - 35.2 |
| **Bush** (Strata 4) | | | | |
| Male | 67 | 37 | 194 | 28.4 - 45.7 |
| Female | 62 | 27 | 191 | 19.9 - 33.6 |
| Total | 129 | 33 | 385 | 26.8 - 38.6 |

### Comparison of Risk Prevalence for Current Smoking by Region

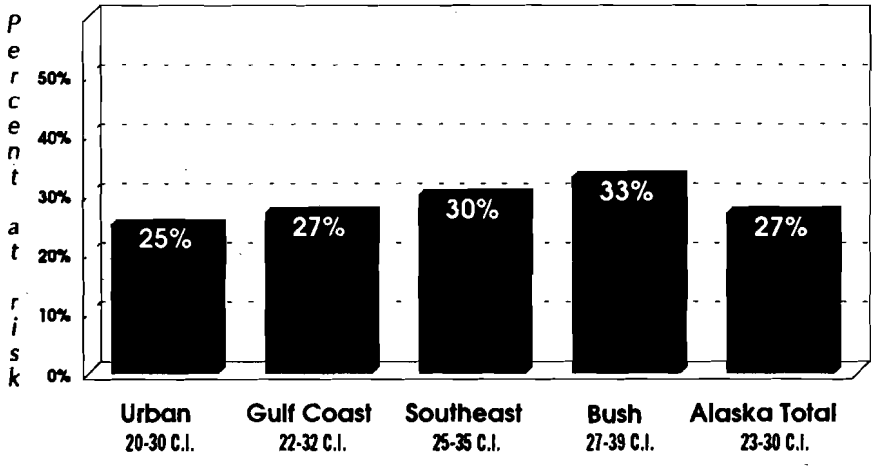


Table 20

# Overweight (2) by Region

| Region | n | % | N | 95% C.I. |
|---|---|---|---|---|
| **Urban** (Strata 1) | | | | |
| Male | 39 | 22 | 175 | 14.8 - 28.6 |
| Female | 47 | 20 | 209 | 14.4 - 25.7 |
| Total | 86 | 21 | 384 | 16.4 - 25.4 |
| **Gulf Coast** (Strata 2) | | | | |
| Male | 58 | 29 | 178 | 21.3 - 36.1 |
| Female | 58 | 29 | 206 | 21.8 - 35.3 |
| Total | 116 | 29 | 384 | 23.6 - 33.7 |
| **Southeast** (Strata 3) | | | | |
| Male | 48 | 27 | 168 | 20.1 - 34.1 |
| Female | 58 | 25 | 213 | 19.0 - 31.6 |
| Total | 106 | 26 | 381 | 21.5 - 31.0 |
| **Bush** (Strata 4) | | | | |
| Male | 47 | 27 | 194 | 18.5 - 35.3 |
| Female | 73 | 38 | 191 | 28.9 - 46.5 |
| Total | 120 | 31 | 385 | 25.3 - 37.6 |

## Comparison of Risk Prevalence for Overweight (2)

### by Region

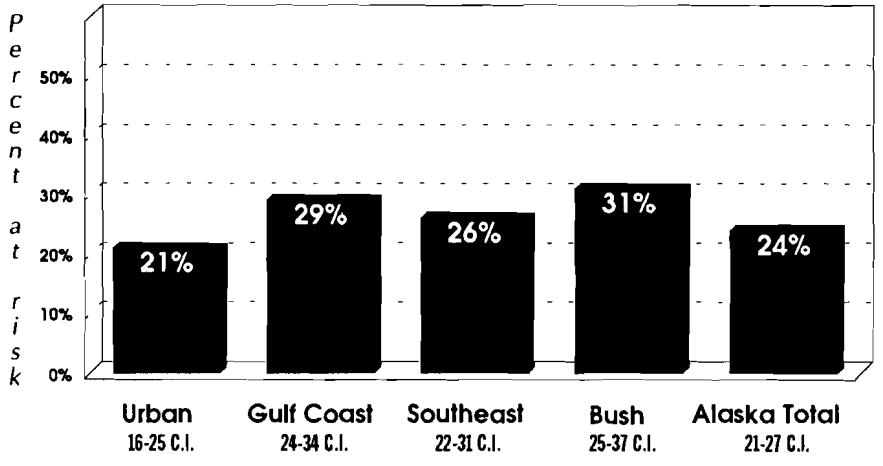


Table 21

# Hypertension (2) by Region

| Region | n | % | N | 95% C.I. |
|---|---|---|---|---|
| **Urban** (Strata 1) | | | | |
| Male | 28 | 14 | 175 | 8.2 - 19.5 |
| Female | 46 | 20 | 209 | 14.2 - 25.7 |
| Total | 74 | 17 | 384 | 12.7 - 20.8 |
| **Gulf Coast** (Strata 2) | | | | |
| Male | 38 | 18 | 178 | 11.5 - 23.9 |
| Female | 41 | 20 | 206 | 13.7 - 26.0 |
| Total | 79 | 19 | 384 | 14.3 - 23.1 |
| **Southeast** (Strata 3) | | | | |
| Male | 32 | 18 | 168 | 12.2 - 24.3 |
| Female | 46 | 23 | 213 | 16.6 - 29.2 |
| Total | 78 | 20 | 381 | 16.1 - 24.8 |
| **Bush** (Strata 4) | | | | |
| Male | 34 | 12 | 194 | 7.6 - 16.7 |
| Female | 39 | 18 | 191 | 12.1 - 24.1 |
| Total | 73 | 15 | 385 | 10.9 - 18.3 |

## Comparison of Risk Prevalence for Hypertension (2) by Region

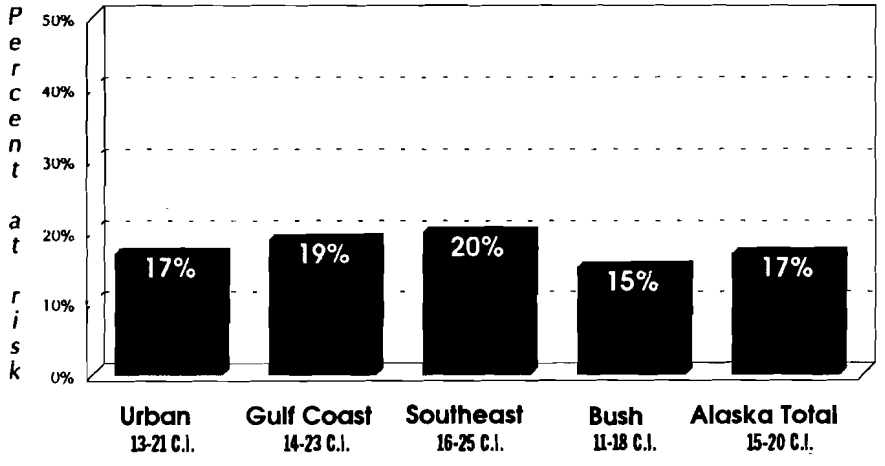


Table 22

# Acute (Binge) Drinking by Region

| Region | n | % | N | 95% C.I. |
|---|---|---|---|---|
| **Urban** (Strata 1) | | | | |
| Male | 41 | 25 | 175 | 18.0 - 32.3 |
| Female | 22 | 12 | 209 | 7.1 - 17.6 |
| Total | 63 | 19 | 384 | 14.5 - 23.6 |
| **Gulf Coast** (Strata 2) | | | | |
| Male | 41 | 26 | 178 | 17.9 - 33.1 |
| Female | 18 | 9 | 206 | 4.4 - 12.7 |
| Total | 59 | 18 | 384 | 13.1 - 22.5 |
| **Southeast** (Strata 3) | | | | |
| Male | 49 | 32 | 168 | 23.8 - 39.1 |
| Female | 24 | 13 | 213 | 7.6 - 17.7 |
| Total | 73 | 23 | 381 | 17.8 - 27.3 |
| **Bush** (Strata 4) | | | | |
| Male | 55 | 26 | 194 | 18.7 - 32.9 |
| Female | 15 | 8 | 191 | 3.5 - 12.0 |
| Total | 70 | 18 | 385 | 13.7 - 22.8 |

## Comparison of Risk Prevalence for Acute (Binge) Drinking by Region

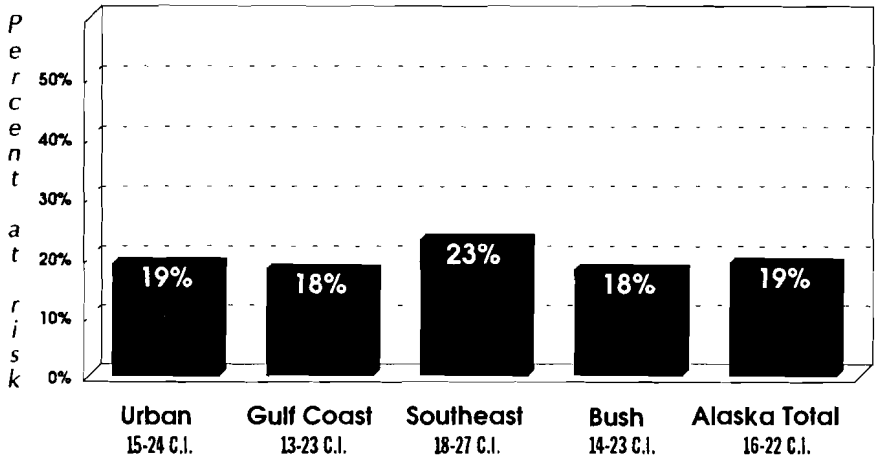


Table 23

# Chronic Drinking by Region

| Region | n | % | N | 95% C.I. |
|---|---|---|---|---|
| **Urban** (Strata 1) | | | | |
| Male | 15 | 8 | 175 | 3.9 - 12.4 |
| Female | 3 | 1 | 209 | 0.0 - 3.1 |
| Total | 18 | 5 | 384 | 2.6 - 7.3 |
| **Gulf Coast** (Strata 2) | | | | |
| Male | 12 | 5 | 178 | 1.9 - 8.3 |
| Female | 7 | 3 | 206 | 0.7 - 5.2 |
| Total | 19 | 4 | 384 | 2.1 - 6.1 |
| **Southeast** (Strata 3) | | | | |
| Male | 20 | 15 | 168 | 8.8 - 21.2 |
| Female | 4 | 2 | 213 | 0.0 - 3.8 |
| Total | 24 | 9 | 381 | 5.3 - 12.3 |
| **Bush** (Strata 4) | | | | |
| Male | 14 | 8 | 194 | 3.2 - 11.8 |
| Female | 3 | 1 | 191 | 0.0 - 2.2 |
| Total | 17 | 5 | 385 | 2.2 - 7.4 |

## Comparison of Risk Prevalence for Chronic Drinking by Region

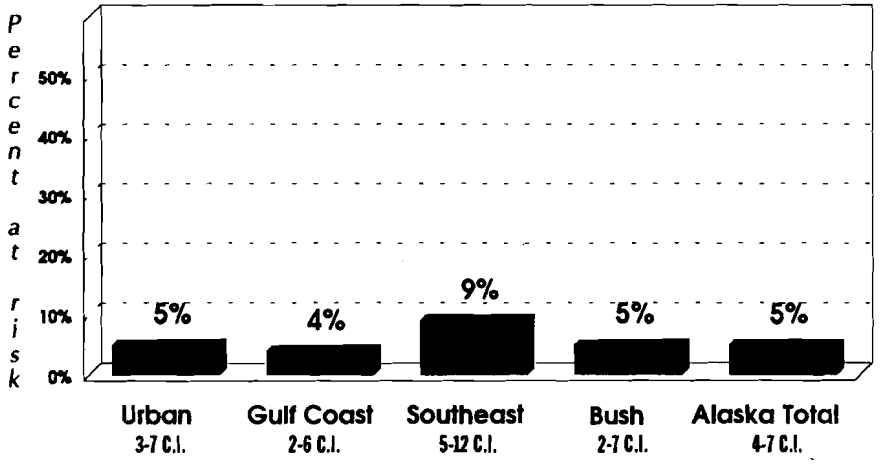
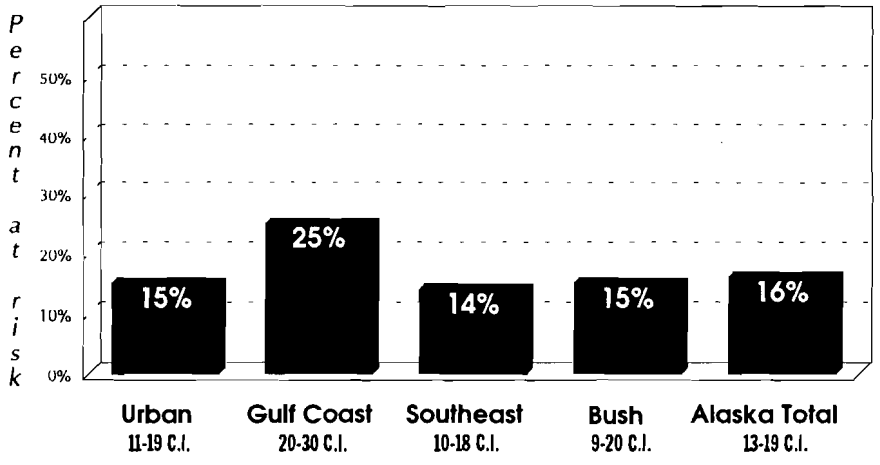


Table 24

# No Health Care Plan by Region

| Region | n | % | N | 95% C.I. |
|---|---|---|---|---|
| **Urban** (Strata 1) | | | | |
| Male | 36 | 21 | 175 | 14.5 - 27.9 |
| Female | 20 | 9 | 209 | 4.7 - 12.8 |
| Total | 56 | 15 | 384 | 11.2 - 19.3 |
| **Gulf Coast** (Strata 2) | | | | |
| Male | 43 | 25 | 178 | 17.3 - 32.2 |
| Female | 51 | 26 | 206 | 19.3 - 32.3 |
| Total | 94 | 25 | 384 | 20.2 - 30.2 |
| **Southeast** (Strata 3) | | | | |
| Male | 27 | 18 | 168 | 11.3 - 24.2 |
| Female | 18 | 9 | 213 | 4.9 - 13.4 |
| Total | 45 | 14 | 381 | 9.7 - 17.7 |
| **Bush** (Strata 4) | | | | |
| Male | 25 | 16 | 194 | 8.4 - 23.8 |
| Female | 16 | 13 | 191 | 4.4 - 21.2 |
| Total | 41 | 15 | 385 | 9.0 - 20.4 |

## Comparison of Risk Prevalence for No Health Care Plan by Region



# Appendix A: BRFSS Definitions

**Acute (Binge) Drinking** Respondents who report having five or more drinks on an occasion, one or more times in the past month.

**Blood Pressure** Respondents who report they have had their blood pressure checked within the past two years.

**Cholesterol** Respondents who report they have had their blood cholesterol checked within the past five years.

**Chronic Drinking** Respondents who report an average of 60 or more alcoholic drinks a month.

**Current Regular Smoking (1)** Current regular smoker (ever smoked 100 cigarettes and smoke regularly now).

**Current Smoking (2)** Respondents who report ever smoking 100 cigarettes and smoke now (regularly and irregularly).

**Drinking and Driving** Respondents who report having driven after having too much to drink, one or more times in the past month.

**Hypertension (2)** Respondents who report they have ever been told they have hypertension (high blood pressure).

**Mammogram** Females 40 and older who report they ever had a mammogram.

**Mammogram (2)** Females 50 and older who report they have had a mammogram within the past two years.

**Mammogram and Clinical Breast Exam** Females 40 and older who report that they have ever had a mammogram and a breast exam.

**Mammogram and Clinical Breast Exam (2)** Females 50 and older who report they have had a mammogram and a breast exam in the past two years.

**Overweight (1)** Respondents at or above 120% of ideal weight. Ideal weight defined as the mid-value of a medium frame person from the 1959 metropolitan height-weight tables.

**Overweight (2)** Females with body mass index [weight in kilograms divided by height in meters squared (W/H**2)]>=27.3 and males with body mass index >= 27.8.

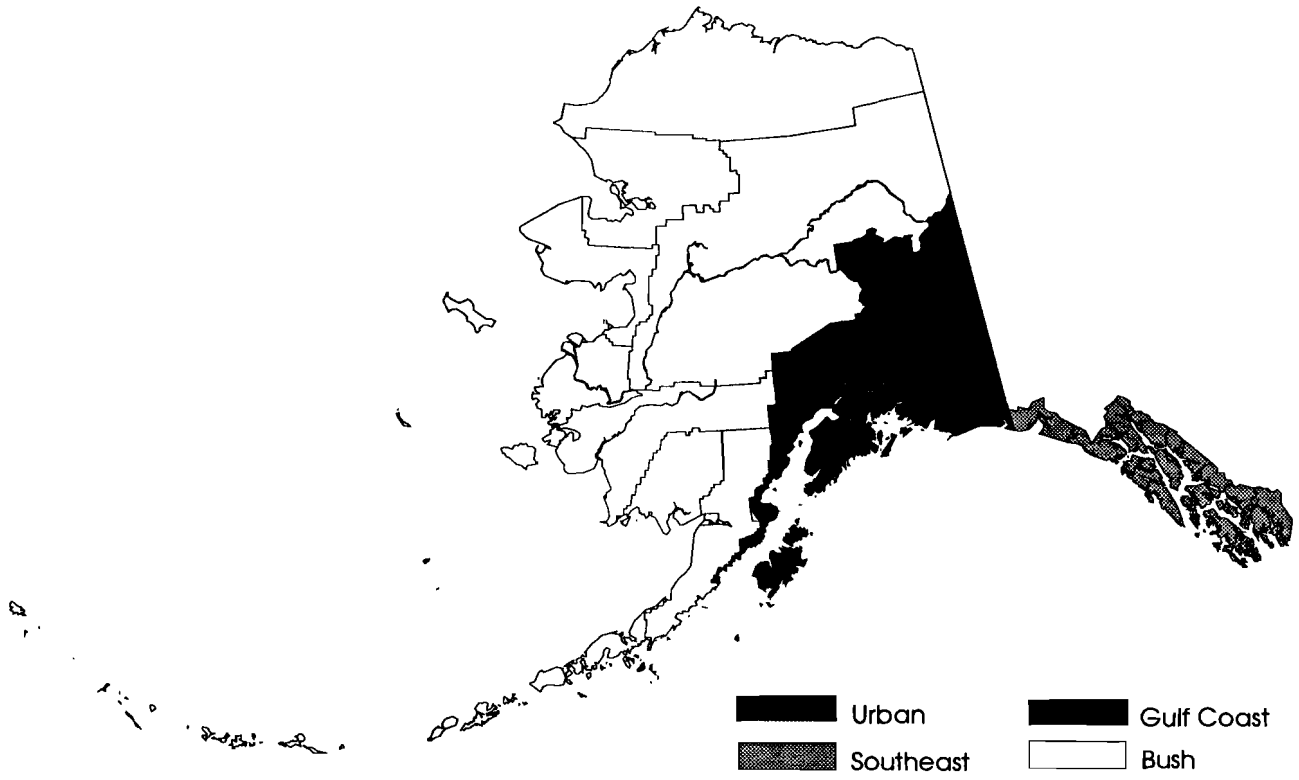
**Pap Test** Females with intact cervix-uteri who report they have ever had a pap smear test.

**Pap Test (2)** Females with intact cervix-uteri who report they have had a pap smear within the past two years.

**Safety Belt (2)** Respondents reporting they "sometimes", "seldom" or "never" use seat belts.

**Safety Belt (3)** Respondents reporting they "nearly always", "sometimes", "seldom", or "never" use seat belts (i.e., do not always use a seat belt).

# Appendix B-1: 1993 BRFSS Sampling Regions




**The Alaska sample was stratified into four regions based on common demographics:**

| | Total Population** | Population 18 years and older | Number of interviews conducted |
|---|---|---|---|
| **Urban** (Strata 1)<br>Anchorage, Fairbanks & vicinity | 349,654 | 242,103 | 384 |
| **Gulf Coast** (Strata 2)<br>Kenai, Kodiak, Valdez, Cordova & vicinity | 64,063 | 43,574 | 384 |
| **Southeast** (Strata 3)<br>All of Southeast Alaska | 68,989 | 48,103 | 381 |
| **Bush** (Strata 4)<br>All other nonurban areas of Alaska | 67,337 | 43,393 | 385 |
| **STATEWIDE TOTAL** | **550,043** | **377,173** | **1,534** |

** 1990 Census Population

# Appendix B-2: Alaska BRFSS Sample Design◆

| | Total Population | White | Alaska Native/ American Indian | Other | 18 years and older |
|---|---|---|---|---|---|
| **Urban** (Strata 1) | | | | | |
| Anchorage Borough | 226,338 | 185,601 | 14,780 | 25,957 | 159,361 |
| Fairbanks-Northstar | 77,720 | 64,672 | 5,383 | 7,665 | 53,313 |
| Matanuska-Susitna | 39,683 | 37,114 | 1,952 | 617 | 25,631 |
| Southeast Fairbanks | 5,913 | 4,734 | 798 | 381 | 3,798 |
| **TOTAL** | **349,654** | **292,121** | **22,913** | **34,620** | **242,103** |
| **Gulf Coast** (Strata 2) | | | | | |
| Kenai Peninsula | 40,802 | 37,220 | 2,942 | 640 | 27,370 |
| Kodiak Island | 13,309 | 9,467 | 2,162 | 1,680 | 9,153 |
| Valdez Cordova | 9,952 | 8,298 | 1,266 | 388 | 7,051 |
| **TOTAL** | **64,063** | **54,985** | **6,370** | **2,708** | **43,574** |
| **Southeast** (Strata 3) | | | | | |
| Haines Borough | 2,117 | 1,817 | 282 | 18 | 1,525 |
| Juneau Borough | 26,751 | 21,765 | 3,509 | 1,477 | 18,889 |
| Ketchikan Gateway | 13,828 | 11,363 | 1,913 | 552 | 9,693 |
| Prince of Wales | 6,278 | 3,872 | 2,368 | 38 | 4,241 |
| Sitka | 8,588 | 6,406 | 1,805 | 377 | 5,955 |
| Skagway, Yakutat, Angoon | 4,385 | 2,662 | 1,681 | 42 | 2,947 |
| Wrangell, Petersburg | 7,042 | 5,565 | 1,370 | 107 | 4,853 |
| **TOTAL** | **68,989** | **53,450** | **12,928** | **2,611** | **48,103** |
| **Bush** (Strata 4) | | | | | |
| Aleutians East | 2,464 | 909 | 1,052 | 503 | 1,911 |
| Aleutian Islands | 9,478 | 6,661 | 1,101 | 1,716 | 7,588 |
| Bethel Census | 13,656 | 2,122 | 11,379 | 155 | 8,325 |
| Bristol Bay Borough | 1,410 | 905 | 455 | 50 | 1,030 |
| Dillingham | 4,012 | 1,035 | 2,938 | 39 | 2,508 |
| Lake and Peninsula Borough | 1,668 | 392 | 1,263 | 13 | 1,036 |
| Nome | 8,288 | 2,064 | 6,157 | 67 | 5,119 |
| North Slope Borough | 5,979 | 1,307 | 4,344 | 328 | 3,734 |
| Northwest Arctic | 6,113 | 842 | 5,211 | 60 | 3,471 |
| Wade Hampton | 5,791 | 349 | 5,407 | 35 | 3,151 |
| Yukon-Koyukuk | 8,478 | 3,603 | 4,734 | 141 | 5,520 |
| **TOTAL** | **67,337** | **20,189** | **44,041** | **3,107** | **43,393** |
| **STATEWIDE TOTAL** | **550,043** | **420,745** | **86,252** | **43,046** | **377,173** |

◆ April 1990 MARS (Modified Age, Race and Sex Data) data, Alaska Department of Labor, Research and Analysis Section, Demographic Unit

# Appendix C: Alaska BRFSS Strata Description ◆

| Age | Total Population | Male | Female | White | Native | Other |
|---|---|---|---|---|---|---|
| **Urban** (Strata 1) | | | | | | |
| 18-24 | 37,553 | 20,504 | 17,049 | 30,096 | 2,924 | 4,533 |
| 25-34 | 74,028 | 37,576 | 36,452 | 61,696 | 4,562 | 7,770 |
| 35-44 | 66,005 | 34,745 | 31,260 | 57,292 | 3,228 | 5,485 |
| 45-54 | 33,765 | 18,081 | 15,684 | 29,659 | 1,777 | 2,329 |
| 55-64 | 18,031 | 9,402 | 8,629 | 15,731 | 1,001 | 1,299 |
| 65+ | 12,721 | 5,816 | 6,905 | 10,972 | 713 | 1,036 |
| **TOTAL** | **242,103** | **126,124** | **115,979** | **205,446** | **14,205** | **22,452** |
| **Gulf Coast** (Strata 2) | | | | | | |
| 18-24 | 5,335 | 2,979 | 2,356 | 4,401 | 675 | 259 |
| 25-34 | 12,328 | 6,607 | 5,721 | 10,635 | 1,148 | 545 |
| 35-44 | 12,866 | 7,081 | 5,785 | 11,416 | 937 | 513 |
| 45-54 | 6,427 | 3,617 | 2,810 | 5,630 | 555 | 242 |
| 55-64 | 3,745 | 2,079 | 1,666 | 3,196 | 389 | 160 |
| 65+ | 2,873 | 1,462 | 1,411 | 2,416 | 348 | 109 |
| **TOTAL** | **43,574** | **23,825** | **19,749** | **37,694** | **4,052** | **1,828** |
| **Southeast** (Strata 3) | | | | | | |
| 18-24 | 5,703 | 3,045 | 2,658 | 4,065 | 1,430 | 208 |
| 25-34 | 13,178 | 6,824 | 6,354 | 10,400 | 2,233 | 545 |
| 35-44 | 13,584 | 7,226 | 6,358 | 11,442 | 1,706 | 436 |
| 45-54 | 7,660 | 4,272 | 3,388 | 6,377 | 1,074 | 209 |
| 55-64 | 4,107 | 2,212 | 1,895 | 3,200 | 740 | 167 |
| 65+ | 3,871 | 1,801 | 2,070 | 3,017 | 689 | 165 |
| **TOTAL** | **48,103** | **25,380** | **22,723** | **38,501** | **7,872** | **1,730** |
| **Bush** (Strata 4) | | | | | | |
| 18-24 | 8,048 | 4,742 | 3,306 | 2,685 | 4,711 | 652 |
| 25-34 | 13,982 | 8,174 | 5,808 | 5,320 | 7,661 | 1,001 |
| 35-44 | 9,993 | 5,976 | 4,017 | 4,422 | 5,005 | 566 |
| 45-54 | 5,392 | 3,124 | 2,268 | 2,151 | 3,033 | 208 |
| 55-64 | 3,348 | 1,889 | 1,459 | 849 | 2,383 | 116 |
| 65+ | 2,630 | 1,339 | 1,291 | 276 | 2,332 | 22 |
| **TOTAL** | **43,393** | **25,244** | **18,149** | **15,703** | **25,125** | **2,565** |

◆ April 1990 MARS (Modified Age, Race and Sex Data) data, Alaska Department of Labor, Research and Analysis Section, Demographic Unit

# Appendix D: Alaska BRFSS 1993 Survey Population

## by Age and Gender

| Age | Male | Female | Total |
|---|---|---|---|
| **Urban** (Strata 1) | | | |
| 18-24 | 23 | 27 | 50 |
| 25-34 | 57 | 57 | 114 |
| 35-44 | 50 | 65 | 115 |
| 45-54 | 22 | 25 | 47 |
| 55-64 | 7 | 13 | 20 |
| 65+ | 15 | 21 | 36 |
| Unknown | 1 | 1 | 2 |
| **TOTAL** | **175** | **209** | **384** |
| **Gulf Coast** (Strata 2) | | | |
| 18-24 | 11 | 18 | 29 |
| 25-34 | 40 | 53 | 93 |
| 35-44 | 51 | 74 | 125 |
| 45-54 | 43 | 32 | 75 |
| 55-64 | 10 | 10 | 20 |
| 65+ | 22 | 19 | 41 |
| Unknown | 1 | — | 1 |
| **TOTAL** | **178** | **206** | **384** |
| **Southeast** (Strata 3) | | | |
| 18-24 | 15 | 20 | 35 |
| 25-34 | 43 | 57 | 100 |
| 35-44 | 46 | 60 | 106 |
| 45-54 | 28 | 25 | 53 |
| 55-64 | 21 | 19 | 40 |
| 65+ | 14 | 29 | 43 |
| Unknown | 1 | 3 | 4 |
| **TOTAL** | **168** | **213** | **381** |
| **Bush** (Strata 4) | | | |
| 18-24 | 16 | 15 | 31 |
| 25-34 | 46 | 61 | 107 |
| 35-44 | 68 | 50 | 118 |
| 45-54 | 39 | 37 | 76 |
| 55-64 | 12 | 17 | 29 |
| 65+ | 13 | 8 | 21 |
| Unknown | — | 3 | 3 |
| **TOTAL** | **194** | **187** | **385** |

# Appendix G: Alaska BRFSS Telephone Sample Generation

The statewide sample was stratified into four regions for the study. Within each region's sample, the proportion of interviews in each prefix is the same as the proportion of active residential lines in that prefix relative to all the active residential lines in the region.

The Institute of Social and Economic Research, University of Alaska, Anchorage (ISER) generates the statewide random telephone number sample using two different techniques;

- for large telephone exchanges and
- for small telephone exchanges.

For large exchanges (over 2,000 residential lines in most cases) a random telephone number generation program (RANDY) developed by Jim Kerr for Professor Jack Kruse. For small exchanges, residential numbers listed in the relevant telephone book are entered and numbers are randomly selected from this pool. (In 1993, one modification was made to the random selection procedure for small exchanges, see details below.)

## Large telephone exchanges

**Randomly generated numbers**

The advantage of randomly generated numbers is that

- ✔ unlisted as well as listed numbers are included in the sample,
- ✔ with good information from the telephone utilities, it means many non-working and business numbers can be filtered out; and
- ✔ it is relatively inexpensive.

**Generated numbers from RANDY**

RANDY works by randomly selecting a prefix (from a list of relevant prefixes) and generating 48 suffixes (random 4-digit numbers) for it. Each line of prefix-plus-48-suffixes represents one interview. For each potential interview, 48 different suffixes are generated, so that even in the smallest prefixes, the line contains at least one working, residential number with residents willing to be interviewed. RANDY repeats this process until the sample size is achieved.

Information is collected from the telephone utilities on the number of active residential lines in each prefix.. This information is used to determine the proportion of each prefix in the total sample.

To improve the "hit rate" (working residential numbers as a proportion of all numbers generated) information is also collected on blocks of numbers assigned to businesses, pay phones, or not assigned, so as to exclude these numbers.

The data collected is read into the program, which calculates the proportion of working telephone numbers in each prefix. Each proportion is expressed as a decimal between 0 and 1.

RANDY then begins the iterative process of generating the sample. Each iteration involves the following:

- A prefix is selected at random.
- RANDY randomly selects a number between 0 and 1, and compares it to the proportion calculated above for the selected prefix..
- If the random number is less than or equal to the prefix's proportion, the prefix is selected.
- If the random number is greater than the prefix's proportion, the prefix is dropped and the iteration starts over.
- Once a prefix is selected, RANDY generates random 4-digit suffixes, filtering out those that are known not to work, until it has generated 48 suffixes.
- The process is repeated until the desired sample is generated.

After RANDY has generated all the needed numbers, it uses a heap sort algorithm to index all the numbers (in this case, the entire 7-digit number, not just the 4-digit suffix). The program compares the numbers and the second and subsequent occurrences of any repeating numbers are deleted. These deleted numbers are not replaced.

## Small telephone exchanges

**Randomly selected numbers from entered sample**

The reason entered numbers are used for small exchanges, is that in Alaska's smaller exchanges there may be fewer than 100 residential phones (sometimes fewer than ten). If large blocks of numbers cannot be excluded from the potential telephone numbers then generating random suffixes will produce only one in 100 (or even one in 1,000) working numbers (since for every telephone prefix there are 10,000 possible phone numbers).

Small exchanges would produce very low hit rates with randomly generated numbers, unless the utility assigned from only a small block of numbers, which is not usually the case. Two thousand active residential lines are chosen as the cutoff point for using random number generation. Using utility data, those exchanges are identified, and from the most recent available telephone books, all residential numbers listed in each small exchange are entered. Some of these small exchanges cannot be entered because some are included in with Anchorage exchanges. Therefore, even though they are quite small, they are in the randomly generated sample (and suffer a high rate on non-working numbers).

For each region, then, there is a file of all the listed residential telephone numbers in that region. Numbers are chosen from the file randomly and printed out in a list, which is slightly larger than the desired sample size. Enough numbers are included in the list to provide replacements for households which have recently moved (or disconnected their

# Appendix I: Weighting

As used here, unweighted data are the actual responses of each respondent. By weighting the data, the responses of persons in various subgroups are adjusted to compensate for the overrepresentation or underrepresentation of these persons in the survey sample. Factors that are adjusted for include the following:

- The number of telephone numbers per household.
- The number of adults in a household.
- The demographic distribution of the sample.

The first two factors address the problem of unequal selection probability, which could result in a biased sample that doesn't really represent the population. For example, an interviewee in a one-adult household has four times the chance of being selected for an interview as does an adult in a four-adult household. A household with two telephone numbers has twice the chance of being dialed as a household with one telephone number. The first two factors are combined to compute a raw (or unadjusted) weight.

Data are then further weighted. Poststratification is the method used to adjust the distribution of the sample data so that it reflects the total population of the sampled area. The poststratification factor is calculated by computing the ratio of the age, race, and sex distribution of the state population divided by that of the survey sample. This factor is then multiplied by the raw weight to compute an adjusted, or final-weight, variable.

This procedure is repeated for each of four regions of Alaska. Since data is collected as a stratified sample, i.e. stratified per region of the state, weights are computed based on the sample and population distribution of each region. Data from all regions are combined to form the total state's data for Alaska.

Thus, this weighting adjusts not only for variation in selection and sampling probability, but also for demographic characteristics in each region of the state. If the data were not weighted, projections could not be made from the sample to the region or to the general population.

In 1993, survey results were weighted using 1990 Census data for Alaska from the U.S. Census Bureau, Population Division, Estimates Branch; Alaska Department of Labor, Research and Analysis, Demographic Unit.

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